SALT AND FISHERY,

A Discourse thereof

Insisting on the following HEADS.

1. The several *ways* of making *Salt* in *England*, and Foreign Parts.
2. The *Character* and *Qualities* good and bad, of these several sorts of *Salt*, English refin'd asserted to be much better than any Foreign.
3. The *Catching* and *Curing*, or *Salting* of the most Eminent or Staple sorts of *Fish*, for long or short keeping.
4. The Salting of *Flesh*.
5. The Cookery of *Fish* and *Flesh*.
6. Extraordinary Experiments in preserving *Butter*, *Flesh*, *Fish*, *Fowl*, *Fruit*, and *Roots*, fresh and sweet for long keeping.
7. The Case and Sufferings of the *Saltworkers*.
8. Proposals for their *Relief*, and for the advancement of the *Fishery*, the *Woollen*, *Tin*, and divers other *Manufactures*.

By JOHN COLLINS, Accomptant to the ROYAL FISHERY Company.

E Reg. Soc. Philomath.

LONDON, Printed by *A. Godbid*, and *J. Playford*, and are to be Sold by Mr. *Robert Horne* at the *Royal Exchange*, Mr. *John Kersey*, and Mr. *Henry Faithorn*, at the *Rose* in St. *Pauls Church-yard*, Mr. *William Bury*, *Globe-maker*, at the *Globe* near *Charing-Cross*, 1682.

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To Sir James Shaen, *Knt. and Baronet; His Majesties Surveyor General of* Ireland, *and one of the Kings Chief Commissioners, Managers, and Farmers, of his whole Revenue of that Kingdom.*

Honoured SIR,

SOme years since when I had first the happiness of being known to you, and at the same time Laboured under great Discouragements in my endeavours to serve the Publick: You were generously pleased to offer me a Considerable Employment in *Ireland*, which favour I had readily, and thankfully accepted, could I have extricated my self from several Difficulties, which then did, and still do lie upon me.

'Tis now my Fortune to be engaged in the Service of the *Royal Fishery Company* of *England*, who after they had lost their Stock of Eleven thousand Pounds, (chiefly by reason the *French* took Six of their Seaven Doggers, with their Ladings, *&c.*) did in *July*, 1680. Sell their Vessels and Stores, and though they came to a Subscription for a New-Stock, yet the affair would have fainted away again, without your assistance, which hath revived it for the present.

And though I am obliged to you in this double Bond of Duty and Gratitude, yet the chief Motive of this Dedication, was indeed the same that occasioned the Publishing this Discourse, *viz.* The great desire I have to see this Company Flourish, by procuring it some considerable Encouragement, which I hope may, and will be done by your means.

The Success that, contrary to all Men's Expectation, hath attended your Management of his Majesties Revenue of *Ireland*, which you have raised to a far greater yearly Sum, than that which Ruin'd the Persons formerly concern'd therein; as it shewes your skill and conduct in things of this Nature, &c. so I hope it will Enable and Encourage you to proceed vigorously in this Design; and if so, I shall account it none of the least Happinesses of my Life, that by my Books, Papers, and Discourses, I have been instrumental to engage you in it.

All that are acquainted with you know, that your Studies and Endeavours for many years, have aim'd at nothing so much, as the promoting his Majesties Honour and Interest, by the improvement of his Revenue both in *England* and *Ireland*, which you rightly say must be effected by the increase of Trade and Manufacture, to enrich his People, and make them Happy: I shall therefore use no other Argument to stir up your zeal in this case, but that the best, if not only way to render the King and Kingdom rich at home, and formidable abroad, is by making the Fishery thereof considerable.

But in what I here present unto you, I have not wholy confined my self to this Subject; because I have a particular *Treatise* thereof ready for the Press consisting of,

1. Narratives of the several undertakings of the Fishery in *England*, with the causes of their Miscarriages.

2. An Accompt of the present Encumbrances or Impediments thereof.

3. An Assertion that *England* can never be considerable in Fishery, without great Encouragements to undertake it in the *North* and *Irish* Seas.

4. The

4. The great Benefits accompanying a good Fishery.

5. The ill Consequences of losing it.

6. Divers effectual Encouragements and Laws propounded.

To which may be subjoyned two Discourses, the one about the necessity, utility, and instructions of a Council of Trade; The other about the Manufactures of Canvas, Cordage, and Linen to be made in *England*, as incredible means to render his Majesty, People, and the Fishery Happy.

I shall say no more at present, but that if there could be contrived the raising of a sufficient Fund, to carry on this great affair, Heaven seems to lend us its helping hand, by infatuating the Councils of the *French King*, who while he aims at universal Monarchy and Trade drives over hither great numbers of his poor Protestant Subjects, very fit to be employed in the Fishery, or which if it thrive, is alone enough to spoil his Project, and to secure unto *England*, the Soveraignty of the Seas.

This is a noble Task, the compassing whereof, would entitle the Persons concern'd to the publick thanks of the Nation, and the Prayers of many thousands of poor People who must be employed therein; how far your Interest and Endeavours can contribute towards it, I earnestly recommend to your serious consideration, and shall always study to approve my self,

Your Worships

Most humble diligent Servant

JOHN COLLINS.

TO THE READER.

I have in the Preface of my Introduction to Merchants Accompts, intimated that from 1642, to 1649, I went Seven years to Sea, the major part of it, in the Venetian Fleet against the Turks assaulting Candy, during which time, knowing that much Meat bought of the Albanezes in the Gulf of Negropont (alias Eubœia) &c. which stunk; it begat in me a Curiosity to Pry into the nature of Salt, and some few Papers of that kind I have met with in Print, and cited, now these being from time to time augmented by the information of some Saltworkers, have begot the following Discourse, and here it behoves me to return thanks, and make my acknowledgments, which I do, first to Mr. William Martin, sometimes a Saltworker in Cheshire (and Staffordshire,) who many years since gave me an account of the said Condition of those Saltworkers, accompanied with some arguments for the Encouragement of that Manufacture.

After this, falling into the acquaintance of the renowned Mr. Richard Alcorne, he courteously invited me to come and see his Work, and the performances thereof, where in August, 1680. he Entertained me most kindly, and hath been the Author of the most considerable part of this Discourse, for which he hath my acknowledgment and thanks; in Pag. 69, &c.

Divers

To the Reader.

Divers in England *and* Ireland, *have unadviſedly (to their great Loſs) attempted to ſet up Saltworks in Places unfit for the ſame; the like undertakings for the future, may poſſibly be prevented by this Diſcourſe. Now a word of addreſs.*

To the Saltworkers, (*&c.*) in General.

Gentlemen,

I have ſtudied to be impartial, and I hope I have rather deſerved your thanks, than reproof; if any of you have any juſt Exception to what is ſaid, vouchſafe to impart the ſame in a Letter to me, to be left at the Coffee-Houſe of Mr. Samuel Booth, *in* Ave-Mary-Lane, *and I ſhall recant in an Appendix, and amend it God willing in the next impreſſion.*

Some of you not thoroughly underſtanding your own Intereſt, may repine at an Impoſition upon Salt, but I pray (after reading this Diſcourſe,) conſider what other redreſs you can reaſonably expect, and that part of ſuch Revenue will ſupport the Fiſhery of the Nation, and the ſaid Fiſhery on the contrary will make amends for the ſame, in regard each Dogger (being a Veſſel of 70 or 80 Tons Burthen,) if conſtantly employed, may ſpend in the North-Sea Fiſhery, and in the Channel Fiſhery for Herrings and Cod, from 45 to 50 Weys, (of 40 Buſhels each) of Salt yearly.

As to the New Invention of making Salt in Pag. 8. *the Puttontees ſay, that it will be advantageous or ſupplemental to all the ways of making Salt yet known, deſtructive to none, and they hope that great quantities of* Engliſh *Salt will come into renown, and find vend in the Northern Kingdoms, in which, according to an account or eſtimate found amongſt the Papers of the learned* William *Lord*

Brereton.

Brereton *lately Deceased, there hath been vended yearly the following quantities.*

Barrels of 4 Bushels each Winchester Measure.

Gottenburgh	10000
Bergben	12000
The rest of Norway	10000
Sweden *and* Schonen *from* Gottenburgh *to* Stockholm, 8 *or* 9 *Ports*	10000
Stockholm, *and as far up as* Finland	50000
Riga, Revell, *the* Narve Curland	
Dantzick, Conningsberg, Stettin, Straelsond, Rostock. *At least as much Salt brought by Sea, as all* Sweden *and* Norway *spends, that is*	184000
Total Barrels	276000

That is 1104000 *Bushels or* 27600 *Wey, this is said to be an estimate made by Mr.* Bedall *a Merchant, in* 1673, *who had Traded long, and Travailed much in these Countries, I knew him well, and remember I recommended him to the Right Honorable the Lord* Brereton *aforesaid.*

Now that our Newcastle Salt may grow more famous, by turning Jarrow Slyke, *mentioned in Pag.* 21. *into a Saltwork; Supply a Northern Fishery, Obtain this Foreign vend, and in General, that the Saltworkers may prosper after their long Afflictions, and the publick reap Benefit by these Endeavours, is the most hearty Prayer and desire of the Author,*

JOHN COLLINS.

A DISCOURSE ABOUT THE Several ways of Making OF SALT IN ENGLAND.

1. *Of Salt made of the Brine from Pits.*

ONe of the moſt Ancient ways to make Salt, is by boyling of Bryne from Springs or Pits; whereof the moſt Eminent are found in *Cheſhire*, and *Worceſterſhire*, Of which in Order.

Of Cheſhire *Salt.*

THe cheif in *Cheſhire* are at *Northwich*, *Middlewich*, *Namptwich*, of which thoſe at *Northwich* have the perheminence.

There is one Pit in the Town, and five without the Town; All which afford excellent Brine, in great plenty; of which is made Salt, pure, ſmall or big kerned, heavy, hard, dry, that loſeth little in Bulk, if well kild or preſt into the Bag; which are the qualities of the beſt Salt, and is there Sold at about 3 *s.* a Load, which contains ſix Buſhels or Meaſures.

And the Place hath a more convenient Scituation than the reſt, as being within five or ſix Miles of *Fratſom*-Bridge, where it is Laden for *Ireland:* And if Encouragements were not wanting, it might be made Navigable to the Sea, by a River running through the Town thereto.

At *Middlewich*, there are ſeven Pits or Bryne ſheaths, which yield moſt rich Bryne, and in great Plenty.

At *Namptwich*, they have one Pit within the Town, and two without, ſufficient to ſerve the Fourth part of the Nation the Bryne being ſo fluent, but of a weaker kind than thoſe of the other VVyches, in which there is ſome ſo ſtrong, that it begins to turn to Salt within an Hours boyling, as I am informed.

Whereas at *Namptwich*, the Pans had need to be twice or thrice filled and boyled down, yea, and I am informed that the late Lord *William Brereton* Deceaſed, made large Leaden Coolers, to put the Salt into when it came out of the Pans, where it would Dry, Harden, and become big Grained. The Reader may take an Eſtimate of the ſtrength of the Bryne of theſe Places, by comparing the Quantities of Salt there made, with the quantities of Coales ſpent, according to a Calculation thereof made, long ſince by his Lordſhip, for one VVeek, on a Medium, as the 50*th.* part of a year.

Names

Names of the *Salt* Works, and Owners.	N° *Pans.*	*Buſhels of Salt weekly made.*	*Loads of Coals ſpent.*	*Price of Coals.*	*Other Coſts.*	*Pans that may be.*
Northwich.				l. s.	l. s. d.	
Earl *Rivers* ——	4	2400	264	15 10	2 0 0	8
Baron of *Kinderton*	4	2400	264	15 10	2 0 0	8
Mr. *Brook* ——	6	3342	396	22 15	3 0 0	6
Mr. *Marbury* ——	2	1300	102	5 16	0 14 0	at pleaſure
Town Works ——	7	2772	462	26 19	3 11 0	7
		12214	1488	86 10	11 5 0	
Middlewich.						
Town Works ——	12	1100	282	14 02	3 0 0	40
Baron of *Kindertons*	7	2210	220	11 00	3 0 4	at pleaſure
Mr. *Oldfeild* ——	1	400	52	2 12	0 10 0	1
Mr. *George Craxton*	1	250	39	1 19	0 10 0	
Mr. *Ch. Mainwaring*	1	340	39	1 19	0 10 0	
		4300	632	31 12	7 10 4	
Namptwich.						
Town Works ——	24	3840	1016	50 16	7 0 0	at pleaſure
Sir *Thomas Delves* near *Oſterton* ——	3	360	200	10 00	2 0 0	
		4200	1216	60 16		

In *Stafford-ſhire*, there is Bryne ſo weak, that the Pans muſt be four or five times filled and boyled down.

Theſe Springs being remote from the Sea, are conceived to ariſe from Rocks or Mines of Salt under the Earth, the which are moiſtened by ſome Channels or ſecret paſſages under Ground, which may be confirmed from a Narrative in the *Philoſophical Tranſaction*, N° 66. how a Rock of

Natural Salt, and a Bryne Pit was diſcovered in *Anno* 1670. Namely a Perſon that ſearched with an Auger for Coles in the Soil of *William Marbury* of *Marbury*, Eſq; lighted upon a Rock of Salt; that which the Inſtrument brought up was as hard as Allom, and as pure, and when pulverized became an excellent ſharp Salt. Out of the Auger-hole Brine flew up more fierce than if it had been ſquirted out of a *London* V.Vater-Engin, uſed for quenching Houſes on Fire: The Bryne proved very vigorous and ſharp, beyond any of the Springs in other Salt-works, to which this makes an acceſſion.

The which may be further confirmed, by a Narrative in *Tranſaction*, Nº 53. By falling in of the Ground, and loſs of a Bryne Spring where one formerly might have been found, conceived to be undermined by ſubterraneous ſtreams, to wit, in the Lord *Cholmondely*'s Mannor of *Bilkly*, about the year 1659. Not far from one of their Moſſes, which is a Mooriſh Ground, very ſtringy and fat, good for Turfs, a peice of Ground about 30 yards over, without any Earthquake, ſunk down with a huge Noiſe, and great Oaks growing on it, fell with it together; which hung firſt with part of their Heads out, afterwards ſunk further down, quite out of ſight. Into which Pit, they let down a Pitcher tyed to a Cartrope, but could reach no bottom with the Ropes they had there: And according to the Judgment of perſons preſent, the Pitcher was carried away as in a Stream, but when they drew it up, it came filled with a rich Bryne. Since the Pit is filled up with Water, and now doth not taſt Salt, but a very ltttle Brackiſh.

Of the Brine of Pits.

IF there be not Ignorance in the Art of Boyling, nor Coſt and Labour wilfully ſpared, there may be made Salt good for all Uſes; And in the Counties aforeſaid, many more Springs might be diſcovered, and vaſt quantities of Salt made, more than can be ſpent in his Majeſties Dominions.

In the *Philoſophical Tranſaction*, N° 142. we read, that there are ſome ſorts of Salt made in *Cheſhire*, that are ſo weak,

weak, that they are forced to keep it in Barrows, in Stoves to dry it, and to make it no faſter than they can ſell it. And this is confeſſed in *Philoſophical Tranſaction*, N° 53. to be rather a fault, than an ignorance in the Boyling, to ſave Charges either in Labour, Time or Fuell; For even of meer Sea-Water, (whereof 5 or 6 gallons will not yield ſo much Salt as one of *Cheſhire* Brine,) may be made a hard dry Salt, that need not be kept in a Stove, or Box by the Fire-ſide.

The ſaid *Tranſaction*, gives an account of the manner of boyling the Brine into Salt at *Namptwich*. They boyl it in Iron Pans, about 3 foot ſquare, and 6 inches deep; their Fires are made of *Staffordſhire* Pit-Coles, and one of their ſmaller Pans is boiled in 2 hours time.

To clarify and raiſe the Scum, they uſe Calves, Cows, and Sheeps blood, which in *Philoſophical Tranſaction*, N° 142. is ſaid to give the Salt an ill ſavour.

As to the goodneſs of the Salt at *Northwich*, it is affirmed by Mr. *William Martin*, formerly a Salt worker, that many Sea-Towns of *England*, and moſt parts of *Ireland* are furniſhed with it, and it excellently ſaves their Beef and Fiſh.

Tranſaction, N° 53. The 7*th*. Query about Salt is,

Whether the Salt made of theſe Springs, be more or leſs apt to diſſolve in the Air than other Salt? And

Whether it be as good to Powder Beef and other Fleſh with, as *French* Salt? To which

Anſwer is made, that *French* Salt comes not thither, to compare the efficacy of the one with the other experimentally; But 'tis there aſſerted, that with it, both Beef and Bacon are very well preſerved ſweet and good a whole Year together: And this Salt is apprehended to be rather more ſearching than *French* Salt; becauſe it hath been Obſerved, that Meat kept with this Salt, ſhall be more fiery ſalt to the midſt of it, than powdred Meat on Shipboard cured with *French* Salt.

To this we ſay, that Beef may be much longer kept than a Year, and ſhall be ſofter and fuller of Gravy, than if it had been cured with *French* Salt, as is afterwards aſſerted.

'Tis alſo ſaid, that *Cheſhire* ſends yearly much Bacon to *London*, which never had any mark of Infamy ſet on it.

To

To which I reply out of certain knowledge, that one Mr. *Glover*, who kept a Chandlers Shop, had ſome Flitches brought up by his Brother a Carrier, that proved to be Naught, Ruſty, almoſt all Fat, the crime of *Cheſhire* Bacon, and for being ſuch, was conceived to be worſe than any other Bacon in *England*.

The faults are but partial or particular, poſſibly the Hogs might be over fed with Whey, and be ſalted only with Brine.

And on the contrary, *Herefordſhire* Bacon, where the Swine beſides Graſs, feed upon Apples, Acorns, Maſt, Beans, and Peaſe, being ſalted with Clods of *Worceſterſhire* Salt, proves the beſt Bacon in *England*, and is ſaid to be brought up Weekly to the Caſtle in *Wondſtreet*.

The Bacon of *Hants*, and other Counties, ſalted with *Port-Sea*, or *Lemmington* Salt, hath alſo as good Repute.

In the ſaid *Tranſaction*, 'tis alſo affirmed, that hanged Beef, which others call *Martinmaſs* Beef, is as good and as frequent in *Cheſhire* as any Place.

This we ſhall confirm, by a Relation imparted by the Learned Mr. *Stretell*, who ſaith

That a *Cheſhire* Gentleman, that was minded to kill and ſtore up an Oxe, for his Family, did chooſe one of the Largeſt, Oldeſt, and Leaneſt, that could be found among many: And after feeding him with Graſs, Hay, and Oats, from the beginning of *May*, till towards *Chriſtmas*, the ſaid Oxe not being heated with Driving, was killed and ſalted up, the Chines and other peices being but gently rubbed with *Northwich* Salt, and put into powdering Tubs, and there now and then as occaſion required were rubbed over again with Salt.

That after 14 Months keeping, a Chine of this Beef was Roaſted, and proved delicious beyond compare, full of ſweetneſs and Gravy, but moderately Salted, and Eat with a ſavour like Marrow; the like he never expects to meet with, ſhould the Cattle either be driven, or the Salt prove bad.

Of Worcestershire Salt.

SEe *Transaction*, N° 142. where there is a Narrative of the manner of Boyling, and an Account that about *Droytwich*, within 4 Miles of *Worcester*, there are many Salt-Springs, particularly one in the great Pit at *Upwich*, of which is made 450 Bushels of Salt in every 24 Hours, so strong that 4 Tuns of Brine make one Tun of Salt.

The Brine is said to be so strong, that it cannot be Boyled in Iron-Pans, neither Cast nor Wrought, because the former breaks, and the latter is too soon Corroded.

But this is denyed, and the contrary affirmed, in a following part of this Discourse, aboout *Portsea* Salt.

They say they are therefore driven to the use of Leaden-Pans, 5 foot and a half long, and 3 foot wide, whereof the sides and ends are beaten up.

Their Fuel was formerly all Wood, but since the Iron-Works in the Forrest of *Dean* have destroyed the Wood there, *&c.* they cannot at any reasonable distance be supplied for one quarter of a Year, and are now forced to use Pit-Coles, that are brought 13 or 14 Miles.

Concerning Leaden Pans, we read in *Transaction*, N° 8. That the Salt-water at *Lunenburgh*, being more greenish than white, and not very transparent, is about the same Nature, and hold with that of *Hall* in *Saxony*, (these being the two chief Brine Springs in *Germany*) and hath a mixture of Lead with it; Whence also it will not be Boyled in Leaden Pans, and if it held no Lead at all, it would not be so good, that Metel being judged to putrify the Liquor.

Whence also the Salt of *Lunenburgh*, is preferred before all others, that are made of Brine Springs there.

To this Passage in the *Transactions*, I subjoyn an Information of the Honourrble *Robert Boyle*, Esq; of the *Royal Society*, to wit, that at *Hall* in *Saxony*, they have a weak Brine Spring, from whence perpetually laving Brine on *Hovels*, covered with Mats close made of Reed, Straw, Flag, *&c.* the Brine running through is much evaporated, exhaled

haled and enriched in the Sun, before it be Boyled, and that in imitation hereof, a cheap Engin is invented, that will caſt or winnow Sea-water ſo long in the *Air*, till it ſnow down a weak ſort of Salt ready to diſſolve, the which is afterwards Boyled, and makes big grained Salt; an Experiment whereof as Dr. *Hornick*, and others affirm, hath been tried before his Highneſs *Prince Rupert*, in the Spring-Garden, in the preſence of Monſieur *Harrell* the Kings Apothecary, and many others: Moreover there are a new ſort of Furnaces for quick Boyling invented, by virtue whereof 'tis ſaid, that now 4 or 5 times as much Copperas, Salt, Allom, *&c.* may be made at the ſame Charge, as was formerly wont to be; an Experiment whereof in Boyling Copperas, hath been tryed before Sir *Nicholas Criſp*. And the aſſertion is upon good Grounds, believed by the Honourable *Robert Boyle* aforeſaid, there being two Patents granted for the ſame: The Prior to an *Engliſh*-Man, and the Latter to a *French*-Man: On occaſion whereof a Diſcourſe ariſing about another Patent, craved for ſeparating good freſh-Water, from Salt-Water; Mr. *Boyle* affirmed, it had been before performed by himſelf, that he had preſented his *Majeſty* with ſome bottels of Water ſo made, and with the Secret, that it would be of great uſe at Sea in many Emergencies, yea and of Ordinary uſe in ſaving much Cask and Stowage; That all Pump-Waters had a little ſaltneſs in them, and that the Waters thus made, were wholſome, and no ſalter than Pump-Water.

The *Tranſaction*, N° 142. about *Worceſterſhire* Salt, hath not anſwered the *Query* about the Time of Boyling, the which indeed is too ſoon; And if this ſtrong Brine be not allay'd with weaker, or Freſh-Water, they are neceſſitated to put a ſmall quantity of Roſin into it, to make it ſmall Grained; And when there cannot be time enough to Boyl, and cleanſe a ſtrong Brine from its Scum, the Sand cannot be got out, and ill qualities muſt in ſome meaſure, remain ſtill in the Salt.

Here, in *Cheſhire*, and other Salt-Works, they uſe to clarify and raiſe the Scum of the Brine, by putting a fourth part of the white of an Egg, into a gallon or two of Brine, which will lather like Sope; a ſmall quantity whereof put into each Pan, raiſeth the Scum.

The

The water of Salt-springs, is very cool at the bottom of the Pit; insomuch that when the Briners go to cleanse it, they cannot abide in above half an hour, and in that time drink much Strong-water; However it never freezeth. See *Transactions*, N° 53. and 152.

Whence we have the following Arguments, to prove the Excellency of this kind of Salt.

1. THe Salt commonly made, after Boyling is dry in 4 hours time, and keeps so without Fire till it is Sold, which may be half a year, or three quarters of a year after it is made, and is not so apt to dissolve as *Cheshire* Salt; Nor as that which is made, by dissolving Bay Salt, and clarifying it.

2. There can be none whiter and freer from Drosse, and it is a weighty Salt: A *Winchester* Bushel being in the said *Transaction* said to weigh half a Hundred.

3. In the time of the *Dutch* War, this Salt was carried into the *West*, where they had before none but Foreign Salt; where at first using, they complained it made their Meat too Salt, which was because they used as much of it, as of *French* Salt; consequently it is better.

4. It hath preserved Flesh for long Voyages, and hot Climates, to wit, to *Jamaica*.

5. Herrings have been salted with this Salt in *Ireland*, and brought over, which have been whiter and better tasted, than those salted with Bay Salt.

6. It is an ordinary way in powdering of Beef, to give it but one salting, to keep it the whole year.

7. They have a sort called Clod-Salt, which is digged up from the bottom of the Pans with a Picker, being the strongest kind of Salt, and most used for salting Bacon and Neats-Tongues. It makes the Bacon Redder than other Salt, and causeth the Fat to Eat firm. And if the Swine are fed with Malt, it hardens the Fat, almost as much as if fed with Peale, and salted with white Salt: And is used by Country Women to put into their Runnet-Pots, and as they say, is better for

their Cheese; these Clods are used to Broyl Meat with, being laid on Coles. This sort of Salt is accounted too strong to salt Beef with, it taking away too much of its sweetness.

Besides the common Salt, it is here ordinary to make Loaves like Sugar-Loaves of the finest of the white Salt, which will keep dry without a Fire. Whereas at *Namptwich*, they are kept long in a Hot-House, and Baked twice or thrice in an Oven, and then placed on a Stove or Chimney Corner, and covered with a Hose.

Mr. *W. Martin*, that hath a Salt-Work in *Staffordshire*, and hath had occasion to View and Surveigh all the Salt-Works in *Cheshire*, affirms, that what is all cadged concerning the Salt-Works in *Worcestershire*, the same may be done and said of the Salt-Works in *Cheshire*.

2. *Of Salt made by Boyling of Sea-Liquor.*

THe want of Brine-Springs on the Eastern Coasts of *England*, and the over-dearness of Foreign Salt, begat the necessity of making much Salt at *Sheilds*, and in the Countles of *Durham*, and *Northumberland*.

The Pans there used are made of wrought Iron, of 18 or 19 foot long, 12 foot broad, and 14 inches deep; the Fewel being for the most part, a sort of crusty, drossy, mouldring Coal, taken from the upper part of the Mine, which if not spent this way, would be for little or no other use, to the prejudice of the Coal-Miners, and be mingled with the better sort of Coals, to the great dammage of the Buyers, especially those of *London*.

The Sea-water they commonly at Spring-Tide let into Ponds called Sumps, from whence 'tis pumpt into their Pans, which are six or seven times filled, and half or more every time Boyled away before it becoms Salt.

Sometimes there are great freshes in the River of *Tyne*, which impair and weaken the Sea-water, but at such times they do not admit the Sea-Liquor into their Ponds, neither need they, for through want of Vent, they give over working five Months in a year.

Of

Of late they Boyle the Salt better, and make it harder than they formerly did: Salt made by Boyling of Sea-liquor, being moist and apt to run to Water, hath undergone a bad Repute.

Dr. *Beale*, in *Transaction*, N° 103. saith, that our good Housewifes do find a great difference between our common Bay Salt, and the several other Salts which are in use amongst us.

We find some white Salt very faint, and the price infers a difference between *Spanish*, *French*, and *Portugal* Salt.

Of Newcastle *Salt.*

IF Salt of this kind be well made, it may be very serviceable for Bread, Butter, Cheese, and Meat for Houshold expence, and without hazard may serve for Meat, and Fish that is not intended to be preserved for long Voyages, and through hot Climates, but a Salt that runs to water, cannot be proper to cure Fish withall, that are salted in Pile or Heaps, for the Salt besides the ill quality and taste which it hath in it of bittern, runs away from the Fish, before it hath wrought its Effect. And the Fishmongers say that instances may be given of whole Ladings that so miscarried,

A Merchant in *Abchurch-Lane*, had a cask of Chines of Bacon, and Chines and other pieces of Pork, that was sent as a Present from *Newcastle*, most of it stunk before it Arrived, and that which did not, was ill-relished and oversalt.

On the contrary, the like hath been sent to Mr. *Bingley*, a Merchant in *Abchurch Lane*, from *Portsmouth*, salted with *Port-Sea* Salt, which proved most excellent: divers of the Chines were taken out, and hung up with Packthreds, and so kept sweet for 4 or 5 Months, till there was occasion to spend them, and they proved Juicy, well-tasted, and not over Salt.

But it may be, there was either negligence or want of skill, in salting the said Pork with *Newcastle* Salt, or new

Salt made use of, instead of that which was old and fit for the purpose; for during our late intestine VVars and Troubles, Beef salted with *Shields* or *Northumberland* Salt, hath been preserved sweet and good, for above 2 years keeping in *Scarborough* Castle, during the Seige thereof.

Of which take the Narrative following, of Mr. George Cowart *Merchant in* Basing-Hall-street.

HE saith, he was in those times a Servant under Sir *Hugh Cholmely* Deceased, who was Governor of the said Castle; who employed *Thomas Knolls* his Cooke Deceased, to Salt and Pack up the said Meat, which he did in the manner following.

1. The Oxen being driven in cool, were afterwards Slaughtered, and hung up in Quarters, till the Meat was cool, which was afterwards cut into 4 pound pieces, and were well rubbed and salted with Salt, and pack't into Tubs or Cask, with Salt between every lay.

2. About 12 or 14 days after, the Meat was took out and permitted to dreyn 24 hours time or thereabouts, and then new salted and packed up again, with Salt covering the Meat in the head of the cask.

3. In the mean while the Brine remaining in the Cask, was Boyled for the space of half an hour, and well scummed, and afterwards permitted, about a day to settle and Cool, and then the top Liquor was powred off, and look't like Canary, the sediments and bottom being thrown away as useless.

4. This liquor was powred at the head of the Cask, to repleniish all Vacuities, and then the cask were covered over or headed up, the Meat being now judged sufficiently salted and preserved for Continuance, which came to pass accordingly, part of it being spent after two years end.

And, that none of it in all that time proved bad, and he believes it would have kept much longer, in regard some of it was afterwards found amongst the Rubbish or Ruines of the

Caſtle, which was in part ſhot down during the Seige, which Beef ſo found, proved very ſweet and good alſo.

The like may be ſaid concerning the late miſcarriages of the North-Sea Fiſher-Boats of the Iſle of *Thanet*, uſing this Salt with ill Succeſs, whereas others have had their Fiſh cured to content.

And there is no doubt but as good Salt is, and may be made of Sea-water at *Newcaſtle*, as in *Scotland*, where many *North-Sea* Boats bound to *Iceland* take in their Salt, particularly one *Cloudeſly Cooke* Maſter of one of the Royal Fiſhery Companies Doggers, in 1674 took in his Salt there, by order of the Company, moved thereto by theſe Reaſons.

1. An old Salt is judged much better and fitter for uſe than Salt new or lately made, in regard it hath had time enough to drip and harden, if well made, or diſſolve if otherwiſe.

2. In regard there is little Salt, (as was alleadged) to be had at *Newcaſtle*, that was old enough for Fiſhery uſe.

3. In regard Salt was to be had much cheaper in *Scotland* than at *Newcaſtle*, where Coals, Dyet, and Labour are much dearer than at the Salt-Works in *Scotland*.

With *Scotch* Salt, he cured the whole Lading of Cod, having none that were weak or ill-tainted.

But of the Fiſhery of *Iceland*, and the miſerable Life of the Inhabitants, we ſhall have a ſeparate Diſcourſe when we come to treat of Stock-Fiſh, Haberdine, Green-Fiſh.

Of Salt upon Salt, or Salt made by Refining of Forreign Salt.

THe *Dutch* above 50 years ſince finding the ill qualities and ill effects of *French* Salt, both as to Fiſhery uſe, and for curing of fleſh for long Voyages, beſides the diſcolouring of Butter and Cheeſe, Prohibited the uſe thereof by Law, and being at Wars with *Spain*, Trafficked to *Portugal*, St. *Ubes*, and the *Iſle* of *May*, for Salt granulated or cerned thereby the heat or vigour of the Sun, and fell to the refining thereof at home by Boyling it up with Sea-water, and thereby clearing it

of three ill Qualities, to wit, Dirt, Sand, and Bittern. Of which more hereafter.

And *French* Bay Salt it self might be thus refined, but proves much worse than the Salts aforementioned, of which so refined may be made Salts good for all intents and purposes: And this may be performed on the Sea-Coast, where there are these Conveniences.

To wit, Ships or Vessels may Unlade or Lade Salt, where there is a River or Harbour of Salt-water, not incumbred with Freshes, or a Bank in which to make Sluices to admit at spring-Tides Sea-water into Ponds or Receptacles, and where there is Coal or Turf plenty and cheap.

4. *Of Salt made upon Sand.*

IN the *Philosophical Transaction*, N° 103. we read that in *Varro's* days it was the reproach of our Transalpines, (who dwelt much further towards the South than we do,) that on the *Rhine* there was then neither Vines, nor Olives, nor Apples, nor Sea-Salt, nor *Fossil*-Salt, but they were driven to the poor shift of using the ashes of burnt-wood for their Salt.

Dr. *Beale*, in that *Transaction* further saith, we have formerly made hard shifts for it in *England*; and that at *Wyre-water* in *Lancashire*, Salt is gathered out of heaps of Sand along the Sea-side in many places; upon which sand (saith *Speed*,) the People powre water until it gets a salish humour, which they afterwards Boyl with Turf, till it becomes white Salt.

A Letter from a *Cheshire* Salt-Worker, gives the following account of it.

Namely, that through Sluices in the Sea-Banks, chiefly at spring-Tides, they let Sea-water into Ditches and Trenches from whence they sprinkle it, or lave it upon level Beds of Sand, that a scurf or Crust may be begotten by the heat and vigour of the Sun, which is afterwards raked up into heaps, and carried in wicker Baskets or Fenders to Brine Wells, where powring Sea-liquor to it, it carries away the salish humour, and leaves most of the sand behind; And if

any

any accompany the Liquor it afterwards settles to the bottom. The Brine thus made is afterwards Boyled into Salt, and makes a good kind in *Lancashire*, but reddish, that is used for curing of Fish, Flesh, *&c.*

The following account of the manner of doing it in *Hants*, is more particular.

A The Trenches are made between every two Rods of Ground in breadth called Beds, whose length may be such as is thought convenient.

The Beds are made upon Sand, on which they bring Sea Mud mellowed by the Sun and the Frost, which they also call Sand, and endeavour to make as fine, as a Gardiner doth a Bed to sow Onions upon; this done, they leave from their Ditches or Trenches, so much Sea-liquor as the Beds will receive for the present Time, which in two days time in hot weather, will be exhaled, the fresh from the salt.

Then the Earth appears in Clods, which they Harrow, and bring on a Drag, and a Rowle, make fine, and repeat Sea-liquor, this twice or thrice practised makes the Earth as salt as is desired, with a scurf of Salt upon it, which done, they remove it in Barrows to Store-Houses to keep, and immediately supply their Beds, and so continue all Summer.

W And when there is occasion to use it, they bring it out in Barrows, and put it into Wicker-baskets like Bechives, that have Dreynes at the bottom, to which putting Sea-water over the VVell, it carries away the Salt into a Well, from whence in Pales it is removed to the boyling Pan, and being well Boyled makes an excellent Salt for Flesh or Fish free from all Dirt and Sand, but this way of making Salt is accounted Laborious, and consequently not much used.

Any Earth that may be made mellow and light, and will imbibe Liquor may be useful; but that which hath a mixture of harsh shuttle Sand, or such as will make Morter, is improper for this purpose. To supply that which is proper, in *Lancashire* they use to pare the Surface of a flat of Sand that is overflowed by the Sea at Spring-Tides, two or three days before those Tides fall too low.

Of

Of Jerbo Salt.

AT *Jerbo*, a place in *Barbary*, 30 Leagues to the VVestward of *Tripoly*, is much Salt made, on a plain of red Sand, by the Sun's Vigor: the Sea (which here ebbs and flows but about a foot,) making its way through the Sea sandy-Banks into the Plain aforesaid. A *Bassa* seeing a Ship Arrive from Sea, and Anchoring on the shoales where is safe Riding, estimates her Bulk, and sells her Lading for about two Dollers a Ton, the which is carried on Board by *Turks*, or *Moors* into the bargain.

This Salt is of so strong a Grain, that it will not readily Dissolve in fresh water, wherefore if it be necessary the Marriners put fresh water to it, to wash out the Dirt and Sand, powring away the Liquor that will run.

Of Salt upon Sand, Embodyed by the Sun.

WHere the Sun shines hot, and the Tides vary but little, 'tis easie to have Salt enough, as they have in many places of the *Streights*.

VVith Salt of the like kind made near *Smyrna*, Beef at Midsummer hath been excellently well preserved in manner following.

The Ox hath been killed one day, and cut out into pieces and salted the next, the Salt hath been beat very small, and the Beef being very well rubbed therewith, it was footed or pressed into a Cask, with sprinklings of Salt between each Lay, in which condition it was permitted to stand 48 hours, for close packing made the Blood to arise above the Meat which was powred off, then a Brine was made of fresh water, and Salt as strong as might be sufficient to cause the Salt to Dissolve, (which it will not, if too little water be put in,) then the Meat was washed in this Brine, and well salted again as before, and then the cask filled up with the Brine aforesaid. This was imparted by Mr. *Richard Norris*, an ancient experienced Master or Mate, who now teach-

teacheth Navigation and Mathematicks in *Crutched-Fryers*, and saith he hath seen it often so done, and none of the Meat stunk.

Observations thereon.

1. WE grant that Meat may be thus preserved from stinking for a years time or more, but withall affirm that such Salt being encombred with Bittern, shall empair it in size gravey and goodness, from time to time till it be reduced to a rotten or mortified substance.

2. The bloody Brine, if there had been an intention of saving Salt, might have been boyled and scum'd, and after its settlement been powred off from its sediments, and used again to good purpose, being freed in part from an ill Quality.

3. Meat in hot Countries, hath been cured with hot Salt and hot Brine, and that it should be so, is the advice of Mr. *Richard Alcorne*, the contrary being proper for cold Climates.

4. He also thinks the letting of the Cask down into the Sea or Water, to be a good means to cool the Meat, and prevent all fermentation.

Many Islands in the *Atlantick* and *American-Ocean*, yield abundance of Salt made of Sea-water by the meer vigour or heat of the Sun, such are the *Tortudos*, but especially the Isle of *May*, one of the Islands of *Cape-Verd*, where whole Fleets of *Newfoundland*-Men, and *New-Englanders* use yearly to Lade: It lies in the North Latitude of about 15 degrees, is Peopled by *Portuguezes*, and their *Negros*, and hath a Governour; 'tis an Island of an Oval form, about Eight Miles in Length, is stored with Cattle, as Beef, Goats, Hogs, Asses, *&c.*

The Salt there is thus made, In the Raines (or that Winter they have) the Wind veres about more Southwardly than at other times, and the Sea swells higher, and makes its passage through the Banks, (as at *Yerbo*) into a shallow Lake of about 3 Miles in Length, and in some places about half a Mile in breadth, yea and covers a large Plain of Sand,

where in Summer time when the Sea is faln lower, it Cruſts or Kernes into large Salt, yea and cakes into large pieces, where it is by the Inhabitants, or (if need be) by thoſe that come to fetch it laid up in heaps, and afterwards conveyed by Aſſes or otherwiſe to the Water-ſide, and thence Shipped: This is not done without paying ſome ſmall acknowledgment to the Governour for the pains of the *Negroes*, who alſo make heaps when need requires, of that which the Lake yields; much tribute is not exacted, in regard Salt enough may be had elſewhere for little or nothing, yea and in many places the Rocks afford great hard pieces or Logs of Salt made only by the Sun, particularly at *Dartmouth* in our Channel as one of his Majeſties Cooks informes me, ſuch are to be had. The Iſland affords no good Harbour againſt Storms, yet Ships may ride near it in Water either ſhallow or deep enough: At preſent we have a fair Correſpondence there, which was once interrupted, by reaſon an Engliſh Ship Robbed them of ſome of their Servants, *&c.* And ſold them for Slaves at the *Barbadoes*, which injury was avenged on a *Plymouth* Ship that next Arrived.

5. *Of Salt made from Brine, raiſed by the Sun, purged and embodyed by Fire.*

SAlts of this kind are made at *Lemmington* in the new Forreſt of *Hants*, and about three Miles North-Eaſt from *Portſmouth*, which Town is ſituated in an Iſland called *Port-Sea* Iſland, from whence the Salt hath its Denomination.

The place where ſuch Salt is made, is called a Saltwork, concerning which the following particulars are requiſite to be inſiſted on.

1. The Quality and Situation of the Ground.
2. The Banking or Recovering the ſame.
3. The making of Brine-pans, and in them Brine by the Suns Exhalation, with the manner of doing thereof.
4. A diſcourſe of Boyling-Houſes, Grates, Iron-pans, and the Art of Boyling the Brine into Salt.

Of each of theſe in Order.

1. Of

1. Of the Quality and Situation of the Ground for the most Convenience.

1. THe Grouud as to Matter, ought to be a Sea-Mud, Oaſe or Sleech, Overflowed if it may be at the loweſt ſpring-Tide 3 foot, and whereas it is Obſerved that the higheſt ſpring-Tide, eſpecially if it be a ſtorm from the Offing, may be 9 or 10 foot higher than the loweſt ſpring-Tide; this renders Banking chargeable and hazardous, if not Land-lockt, or within a Creek or Arm of the Sea, where it is not annoyed with freſhes.

The reaſon of ſuch Overflowing is, that there may be made feeding Ponds, as they call them, with Walls of Earth, to keep Sea-Liquor in of any Dimenſions, two foot in height one above another, ſo that the Loweſt may be filled by a little Sluce in the Bank, at the loweſt ſpring-Tide; the reſt at other higher or ſpring-Tides, where this Liquor which is called Stay-Liquor will improve by the Sun and Wind, before it be tranſmitted into the ſhallow Brine-Pans, which are ſuppoſed to be made on lower Ground, ſo as to receive ſupplies from theſe Ponds whenſoever the ſame is requiſite. Theſe Ponds are repleniſhed with Fiſh from the Sea, as Mullets, Place, Flounders, Eeles, &c. Where they increaſe incredibly, and much exceed in goodneſs and largeneſs, freſh River Flounders and Eeles; and where there is convenience for ſuch Ponds, there may be likewiſe for Oyſter-Pits.

2. The Ground as to Quality muſt be a ſtrong Sea-Mud, of a nature like Clay, that will retain Liquor without tranſuſion: And if the Ground be not ſand, Gravel, Chalk, or Moor, 'tis probably fit for the purpoſe, and more proper than Clay, (as being of a looſer Body,) which is more difficult to be wrought, requiring three times the Labour, and is more apt to ſplit or crack.

3. This Mud for conveniency, ought to be eight foot or more deep, for the making of Ponds expoſed to the Weather, called Ciſterns, or common Receptacles to keep Brine in, without ſoaking away after it comes from thoſe Pans called Sun-Pans, where it it is ſuppoſed to be made ſufficiently

strong, and is transferred into these to grow more mature or mellow with Age: In these Cisterns the Brine may be impaired by Rain-water, in such Case, that Swims uppermost, and the Brine may be pumped from the bottom of the Pond, by square Pumps leaning on the side of the Bank, the bottom of the Pump being fastned into a Basket.

If one of these be covered over with a Tiled-Roof, it is called a Brine-House, to retain store for Winter Boyling; And a Tyled-Roof is more convenient than Thatch, for when Repaired, the Strawes will fall into, and discolour the Liquor. The sides and ends of the Brine-House, ought to be Posts of Timber, with Hurdles behind them; the Ground being such as will not imbibe the Liquor as aforesaid.

If the Ground do not admit such Depth, these inconveniences cannot well be avoided; Cisterns must be made above Ground,

Into which the Brine must be Pumped or Laved; with great Charge and Labour, which the Workmen in wet-Weather will decline, to the loss of much Brine that might be saved.

The Brine in the Tiled Brine-Houses, freezeth not in Winter-time, but in the uncovered Cisterns, the Ryme or Fresh at the Surface will freeze, which ought to be removed.

2. *As to the Situation.*

IT ought to be such, where fair Sun-shiny-weather is most frequent, where the Wind may have free Access, near to a Coal-Mine, or a good Turf if possible; However not far from such Port, Creek, Harbour, or Mole, where Coals may be Landed, and Salt Exported.

If convenient choice can be made, it may resemble a great Pond, or Lake rising on each side, with a Channel in the middle of it, which being Banked athwart, will lessen the height of Banking, and consequently the Charge, and if it be in a Salt-water-River Land-Lockt, the Bank is more secure from dangerous Breaches, that may be made in it by the Sea,

Near

Near the Channel in the middle may be made a Key, whereon to Land or unload Goods, from Veſſels that come up, or go down the Channel, athwart which in the deepeſt part may be made a Sluce, with ſtrong Gates or Portals like Shop-windows, with Hinges that ſhall open Sea-wards to carry off Freſhes or Floods, and when the Sea comes in ſhall ſhut and keep the ſame out, and towards the Land may have other Gates to be drawn up with Windlaſſes.

It may be objected, *that theſe qualifications ſeem ſomewhat difficult.*

Anſwer, 1. Places enough may be found if Encouragement be not wanting.

2. It maybe there are but few more neceſſary, *viz.* one in the *Weſt* of *England*, where *Hamoſe*-water near *Plymouth* is conceived to be a proper Place, and the like ſome ſuggeſt concerning *Falmouth*.

Poſſibly another more Northward might be deſirable and that might be at *Jarrow Slyke*, a little within the Mouth of the River *Tyne*, (or *Newcaſtle*) to the incredible advantage of a Northern Fiſhery, for Salmon, Cod, and Herrings, but of this more hereafter.

3. *Of Banking in, and Recovering the Ground.*

THis is to be performed by aid of *Ginn*-Boats, to drive into the Mud rows of Trees, and Poſts ſharpened at the Lower end, to ſhape out a Walk.

Theſe Trees to be bound together long-ways, and broad-ways like the Ribs of a Ship, with ſitterns or pieces of Oak, or croſs Bars; And after good ſtore of ſtones have been thrown into the middle and parts adjacent to the Channel, where theſe Trees ought to be thickeſt and longeſt, the ſame to be boarded up and the whole to be filled, as and when it ſhall ſeem meet, with Stones, Gravel, Clay, *&c.* which will force the Mud out on each ſide, and beget a Declivity, which Seaward may be hardened with Gravel to become

come a narrow Walk, whereon to stand to drive in Stakes as occasion shall require; whereto to fix Hurdles or Hedges, which will be filled with Sea weeds, and will much defend the Bank from being washed down by the Waves, or dashings of the Water in Stormy-weather.

'After the same manner many of our bad Roads may be mended, particularly one called *Battleton-Lane*, near *Hockly* in the '*Hole*, is so bad in Winter-time, and so full of deep Slowes, 'that Wagons cannot pass it without great difficulty, and di-'vers Teams to draw them through, with hazard of overthrow-'ing, which forces them to give over and Travil with Horse-'Packs, yea in the middle of *September* last, when the Wea-'ther was good, it was very troublesome.

In the Banks aforesaid, besides the great Sluce in the Channel, there must be divers little Sluces of different heights, according to the difference of Tides, to let in Sea-water, to repleniſh the seeding-Ponds before mentioned.

The Bank being made, and the Sea kept out, after a hot Summer or two, the recovered Mud will become dry, rugged, and full of great Cracks, Clefts, and Chasmes, which must be filled up with Earth, and the Ground reduced to feeding-Ponds as before mentioned, and the rest to Levels for Brine-Pans. Of the Mud thus recovered, may be made excellent Bricks; this kind of Earth being of a durable conservative Nature, such of it as is designed for Tillage or Pasture Ground, must be deep Ploughed up and Harrowed, that Rainy-water may wash the Salt out of it, or that it may be cured with Lime or Marle, and when so done, proves a most admirable fertile Ground, for Grass and Corn, and is often used as a Compost to improve Barren Land. See *Philosophical Transaction*, N° 54, Page 1079, where you will read, that Ground where Salt or Brine is spilt, is when dug up excellent Muck for Grazing Ground, and even the Bricks that are thoroughly tinged with it, are very good Muck, and will dissolve with other Muck, and fertilize Grazing Ground considerably for at least 4 years.

Of

Of the uſefulneſs of Salt, in rendring Land fertile.

TO which we ſhall annex divers inſtances of the like kind taken from Mr. *Hartlibs Legacy*, Sir *Hugh Platts Jewel Houſe of Art and Nature*, which he ſays page 128, were found out by meer chance, and not by Induſtry.

1. The firſt was of a ſilly Swain, who paſſing over an Arm of the Sea with his Seed Corn in a Sack, by miſchance at his Landing fell into the Water, and ſo his Corn being left there till next Low-water, became ſomewhat Brackiſh, yet ſuch was the Neceſſity of the Man, as that he (notwithſtanding that he was out of all hope to have any good ſucceſs thereby, yet not being able to buy any other,) beſtowed the ſame Wheat upon his Plowed Grounds, by the advice of a worthy Gentleman who imparted the ſame. In fine when Harveſt-time came, he reaped a Crop of goodly Wheat, ſuch as in that year not any of his Neighbours had the like, yet the Experiment hath not been further proſecuted.

2. A Perſon of his own Inclination, ſowed a Buſhel of Salt long ſince at *Clapham*, upon a ſmall patch of Barren Ground, which to this day remains more freſh, green and full of ſwarth, than all the reſt of the Fields about it, but this he did not proſecute further, in regard a Buſhel of Salt coſts more than two Loads of Dung.

3. It is the daily and uſual practice in the Weſtern parts of *England*, for the people to carry their ſaltiſh Sands into their Barren Grounds, whereof ſome of them do lie five Miles diſtant from the Sea, and find the ſame exceeding profitable, for that thereby their Inheritance is enriched for many years together.

More particularly, Mr. *Carew* in his *Survey* of *Cornwall*, relateth that they uſe a fat Sea-Sand, which they carry up many Miles in Sacks, by which they have very much improved their Barren-Lands.

4. The ſurrounded Level at *Erith*, hath been moſt ſuperlatively commended for its fertility, in thoſe two breaches which are now Banked.

5. At

5. At *Namptwich*, upon the fall of any great store of Land Waters into their Pits they are forced to empty and draw out all the fresh Water, which always flotes upon the Brine, and to bestow the same in such places as are neareſt, and therewith also emptying some of the Brine with the fresh-Water, they find in time this Earth so strongly seasoned with these brackish-Waters, that no Soile or Dung is comparable unto it, for the manuring of their Ground.

6. In the Salt-Marshes of the Isles of *Xaintoign*, there are little Hillocks on which is mowed as good Grass as in many other places: And those Hillocks do come up of the Grounds and Washings, thrown up from the bottom of the said Marshes, which are as Brackish as the Sea-water; and yet nevertheless saith Sir *H. Platt*, page 104. I did never see any fairer Corn in my Life than groweth in them.

7. The Vines of the Country of *Xaintoign*, which are planted in the midst of the Salt Marshes, do bring forth a kind of black Raysin, which they call *Canchets*, and whereof there is a Wine made that is nothing inferiour to our Hypocras, in which they use also to dip their toasted Bread; and their Vines are so fertile, that one Plant of them doth bring forth more Fruit, than six of those that grow about *Paris*, so that 'tis evident, that Salt doth help the Goodness, Sweetness, Maturity, Generation, and preservation of the said Vines; also the Air it self is benefited thereby, albeit here is no design to prove that common Salt agrees with all kind of Plants; yet all manner of Fruits Planted in the Salt-Marshes of *Xaintoign*, and all wild Herbs, Thornes, and Thistles prosper so exceedingly there that no where better.

An Advertiſement imparted by the Learned and affable Doctor Robert Wood, *to prevent the Smuttineſs of Wheat.*

8. IN the South-Weſt of *Surry*, their Wheat-fields were formerly much annoyed with Smut or Brag, *viz.* A black duſt in the Ear inſtead of Corn, which they never failed to cure in the manner following. To wit, they made a ſtrong Brine of a peck of Salt, diſſolved in about 5 or 6 pecks of water, in this Brine (a little warmed,) they infuſed all Night about two Buſhels of Seed-Wheat, namely what they intended to ſow the next Day. The next Morning early they powred the Brine and Wheat in it, into a large Basket, or Flasket ſet over a clean empty Cask to receive the drayned Brine, and then let it ſtand to dreyn or drop, till themſelves had Breakfaſted, and their Plow-Horſes foddred; the Brine they preſerved till Night, for the like uſe, with ſome little addition of Water and Salt: The Wheat they powred out upon a clean Floore or Pavement, and mixed with it ſome ſlacked Lime to dry it, and make the Grain (which thus reſembles ſmall Comfits) ſeparate from one another in Sowing, and ſo carry it into the Field and Sow it: The Crows and other Fowl finding it too hot in the taſt will not Eat it, as they uſually do other Seed; Smutty grain thus Sown, yields a clean Crop, and the Salt and Lime together do contribute ſome warmth, as well as luſt and heat to the Seed, and help the defect of other Manure.

This is uſed in ſeveral other parts of *England*, and upon tryal it will be found, that if one ſurrow be neglected, that will Miſcarry, whereas another that is not, is remedied.

To which Experiences divers Reaſons may be added.

1. Mariners can atteſt, that ſuch Waters as be ſomewhat brackiſh are beſt for long Voyages, and therefore they do often fill their Cask at Springs near the Sea, and even good Waters, by ayd of a little Salt may be kept freſh and lived longer than ordinary.

2. Such Springs as are offensive in smell, or that have any bad or corrupt tast with them, are no way better to be purified and cleansed, than by casting Salt into them, and generally Waters become more deadly and contagious, by their putrified and offensive smells, than by their Saltness.

3. Habitations on the very Sea-Coast, prove generally wholsome, the saltness of the water not tending to Destruction unless in the dead Sea, or Sea of *Sodom*, which engendreth no living thing.

4. Salt-waters themselves are most fruitful, neither is there any place in the World, where that generative virtue doth more abound, or where there is more generation or Multiplication of Creatures than in the wide Ocean.

5. Certain Plants and Fishes prosper best in the Salt waters, as Samphire, Flounders, Plaice, Mullets, Eeles, Oysters, and divers other sorts.

In the Brine-Ponds of a Salt-work. And in *Xantoign*, (saith Sir *Ed. Piers*, besides what is before mentioned,) is an Herb from which is extracted *Sal Alcali*, another called *Sulivor*, whereof beautiful Glass is made.

Also Wormwood with this property, that if one do Boyl the same, and with the Decoction thereof temper a little Meal and make it into Past, and fry the same either in Lard or Butter, and Eat thereof, it will expell all such Worms, as are either within the Bodies of Men or Children, which the Author did not understand till he had six Children Dyed of the Worms, as he manifestly perceived in Anatomizing their Bodies, as also for that oftentimes they voyded them at their Mouths, and when they were drawing to their end, these Worms would issue at their Mouths.

6. Rain-water hath a more fructifying virtue and saltness in it, than fresh Rever or Spring water, hence the Clouds are said *to drop Dew*, Prov. 3. 20. The Lord in *Amos*, 5. 8. and Chap. 9. 6. He that *buildeth his Stories in the Heaven, and hath founded his Troop in the Earth, he that calleth for the Waters of the Sea, and poureth them out upon the face of the Earth, the Lord is his Name*: According to his promise in Deut. 32. 28. *That his Doctrine shall drop as the Dew.*

Object.

Objection,

1. Brackiſh Waters are unfit to make Drink for Man's Body.

Anſwer, Nothing is more unſavoury in our Drink than Salt, becauſe that our thirſt doth naturally deſire to be ſatisfied with that which is cold and moiſt, whereas Salt on the contrary is hot and dry, but hence it doth not follow that Springs which be ſomewhat brackiſh, are improper to water the Grounds.

2. To Man and divers other Land-Creatures, the eating of much Salt is very contagious, becauſe it maketh the Blood Salt, and breedeth Barrenneſs in Man's Body, by the exceeding dryneſs thereof, and maketh our Seed or Nature too ſharp.

Anſwer, Salt moderately uſed is ſtirring in our Bodies, it whitens, hardens, and ſavours all things, as Beef and barrel'd Cod, *&c.* Which cauſeth Vegetation, and gives good nouriſhment.

3. In Holy Writ we read *Judges* the 9. 45. *That Abimelech when he took the City of the Shechemites, beat it down and Sowed it with Salt.*

And the Pſalmiſt, *Pſal.* 107. 34. Saith, *He turneth a fruitful Land into Barrenneſs,* (Heb. *Saltneſs*) *for the wickedneſs of them that dwell therein.*

Whence it may be urged, that Saltneſs is a principal means to make the Ground unfruitful, and the ſowing of Salt thereon, bringeth forth Barrenneſs, and a Curſe upon it.

Hence ſome humane Laws of our ancient Fore-Fathers ſeem derived: Namely, That all ſuch Ground as became forfeit and Confiſcate to the Crown, by reaſon of a high and Capital offence committed, ſhould be Plowed and Sowed with Salt.

Anſwer, 'Tis granted, that to lay on too much Salt, through its corroſiveneſs it doth burn dry, and renders the Ground Barren and unfruitful.

And ſuch is Mud Ground recovered from the Sea, till it be prepared for Tillage and Paſturage, as before is mentioned in page 22.

On the contrary, Grounds that are wrought out of hearts are unfruitful for want of Salt, and Barren-Grounds are improved by Dung which is laid thereon, which could no way enrich the same were it not for the Salt, which the Straw and Hay left behind them by their Putrefaction.

This premised, the Author proceeds to give an Account

Of the moderate use of Salt in fertilizing Land.

HE adviseth, that they begin with small practises on arable Lands, before they proceed to Pasture or Meadow.

2. Not to overflow any Grounds already Sowed, or intended to be Sowed, with their Grain, but rather some waste Ground or other, which after it hath been glutted with Salt-water divers times, and then repoled it self a sufficient time, might serve instead of Marle, or other Dungs to spread abroad upon their Barren Corn-Grounds.

And this is so well performed, where there is not any artificial Observation at all made, to wit, at *Nampwich*, that any one that hath conferred with them about the same, may effect the like in any parcel of Land, bordering on the Sea, or any Arm thereof.

Yet the Brine of those Pits, yields one third, or one fourth part Salt, whereas the Sea-water doth not for the most part contain above an eighteenth or twentieth part of Salt, which is a great disparity, but that much Land water is also Laded out of these Pits with the Brine.

More particularly to fertilize ground with Salt, the Author directs, that before the Ground be Sowed, there be mingled two bushels of Bay-Salt, amongst two bushels of Winter-grain, and disperse them together on the Ground, and you shall find a good increase of Corn, and the Land it self much bettered and cleared of Weeds, as he hath been credibly informed.

Ridisso a *French* Man affirms, that Salt doth cause divers places about *Rochel* to be fertile.

Markham, an experienced Husbandman, prescribeth common Salt, always to be mixed with the Grain, for obtaining incredible Crops. Lastly, The Lord *Bacon*, whose Authority is of good credit with us, attributeth fertility to Salt.

After the Bank is made, and the Land well recovered, dwelling Houses for the Owners and Salt-Workers may be Built, near to the Bank, the better to Watch, repair and secure the same, and to save charges in the Carriage of Goods more remote: Nor is a Habitation just next the Sea unhealthful, as is evident from many places on the Coast, as *Hastings, Rye, Deal, North-Yarmouth, Whitby, &c.*

4. *Of the making of Brine-Pans, and Brine.*

SUppose the level Ground aforesaid be divided into square Partitions, like Earth-beds in a Garden, or like three rows of square Trenchers.

Three of them are called a Rank, to wit in the Figure adjoyning, W is called the Water-Pan, 2 the Second-Pan, and S the Sun-Pan, and so in the same piece of Ground may be made as many Ranks as the Dimensions thereof can admit.

S	S	S
2	2	2
W	W	W

Each of these may be two Rods or Poles square, with Ridges of Sea-Clay between each, for a Man to walk upon.

These Pans must be smooth and Level, to be floated alike all over, to accomplish which, Water it self designs a Level.

These are made such, by Men walking on them with Boards tyed to their Feet called Glib-Boards, who with Iron Rakes break the Clods, and with Wooden Rakes like Kennel-Rakes, or Boards of about 2 foot long, smooth the Ground, which is moistned with Water.

On the outside of the Water-Pans, is a little Channel of Sea-water, derived from the feeding-Ponds, that lye upon higher Ground.

Out of which Channel, after the Water is setled, and the Pans seasoned, each Water-Pan is filled about three Inches deep with Sea-Liquor, where after it hath been exposed to

Pans the

the Sun and Wind in a fair hot Summers day, two Inches of it may be derived into the second Pan; and after it hath likewise been exposed there, one Inch of it or less is to be derived into the Sun-Pan.

The transferring of Water or Brine from one Pan to another, is performed by a Man with a little Paddle as broad as the Palm of a Mans hand, with which he turns out a Clod that opens a passage for water, from each Pan to the other, and when the Liquor is run, puts it in again, with cemented Mud.

A skilful Brineman will govern and direct 3 or 4 Labourers, he may himself Earn 8 *s.* a Week, and in Harvest weather more: One skilful person, can mannage and look after 60 rank of Pans.

On the out side of the Sun-Pans, is a little Channel made to convey the Brine (in common from them all) to a large Pan, any where conveniently Seated, called the Common Sun-Pan, which may be so deep as to be filled 7 or 8 Inches with Brine, where it may remain mellowing from 6 to 24 hours, or till the Liquor bears a Hens-Egg new laid, till it floats above water the height or breadth of a Threepence or a Grout, or till it be so strong, that the Egg lies along in it half above water,

Here it may not be improper to intimate, that the ingenious Mr. *Richard Walker*, chief Gauger of the Excise Office, besides his other Qualifications, hath great skill in Glasses, and Glass-Working, and hath invented a Glass, with a liquor in it hermetically Sealed, which doth by its depth in swimming in Wort-Liquors, and Wine, determin the strength thereof, which doubtless might be properly applyed to Brines.

The Brine in these Pans being found of a sufficient strength, is from thence derived by Channels of Brine-Currents to those Ponds called Cisterns, where the Rain and the Sun breed red Worms, that cleanse and purify the Liquor, where it ripens or mellows by Age, and grows the more fit for Boyling; Old Brine far exceeding that which is New. Between the Cistern and the Tiled Brine Store-House, there ought to be Pipes under Ground, to convey the Brine from the former into the latter; In which pipes there are Stop-Cocks,

and

and other Pipes let into the former, from whence the Brine of either, as ſhall be thought fit, is to be pumped up by Windmill-Pumps that have Crankes like the handles of Wimbles, and conveyed by the latter Pipes to Wooden Clearers, (like Brewers Fats or Coolers,) at the Boyling-Houſes.

In Mr. *Alcornes* work near *Portſmouth*, is a notable Windmill-Pump, that raiſeth the Brine about 24 foot high, to wit, Pipes go away from the bottom thereof, which is not above half a foot under ground, in a declivity, or leaning on one ſide to the Pipe in common between the Ciſtern and the Brine-Store-Houſe, and ſo the Pump doth from either raiſe it about 12 or 14 foot on one ſide, and forceth it 10 or 12 foot higher in the former Pipes, continued on the other ſide to the Clearer at the Boyling Houſe: The foot of the Windmill-Pump, reſting in and moving round in theſe Pipes, with two Clappers on each ſide, to keep all Liquor drawn up from running back, that when the one is open, the other is ſhut.

And here perchance it may not be improper to mention, that Sir *Samuel Moreland*, hath lately invented an Engin, that forceth Water in a continual Stream, without Starts, much higher than the Banquetting Houſe at *Whitehall*, and the like at *Windſor*, above the Caſtle, to his Majeſties great ſatisfaction, and his own great Renown.

The querie may be, whether the ſame be not Applicable, to the conveying of Brine from one place to another?

The Brine raiſed by the Sun as aforeſaid, proves better than any natural Brine of Pits hitherto known, moſt of thoſe being either too weak or too ſtrong, and not mellow with Age; yea and better than any Brine made by melting of Forreign Salt in Sea-Liquor.

The ſhallow Pans aforeſaid in Rainy weather in Summer, are kept floated, to preſerve their bottoms, and in Rainy weather in Winter, are left open, to be waſhed clean, and made hard by the ſaid Rain, to carry away the Flip, or Slime in Currents: And in *March*, or *April* following, 'tis uſual to cleanſe the ſaid Pans, and for preparation, to float them with no more Salt-water than will wet them.

There will grow in theſe ſhallow Brine-Pans, Samphire of a far more excellent kind and taſt than that, that is gathered from

from Rocks in the Sea, and ſuch as is by ſome Phyſitians much coveted for the cure of certain Diſtempers.

In *Staffordſhire*, and other places, are Brine Pits that yield a Liquor ſo weak, that a Pan muſt be thrice filled, and Boyled half away each time, before it be ſtrong enough to Boyl for Current into Salt.

Were it improper to try, whether the ſaid Brine might not be ripened on Clay, *&c.* Or on Mats by laying as in page 7, and thence meaſures taken, to avoid ſo great trouble and expence of Coals in the Boyling?

5. *Of Salterns or Boyling-Houſes, Grates, Furnaces, and Iron Boyling-Pans, with the Art of Boyling of Brine.*

A Boyling-Houſe is called a Saltern, and ought to be Built near to the place from whence the Brine is to be ſupplied, of a ſize ſuitable to the number of Iron-Pans, that can be there employed.

Theſe Houſes are but one Story-high, of Stone or Brick, and ſo thatcht up to the Top, (like Barns,) but muſt be left a foot open in the Ridge, for the ſteam of the Boyling-Liquor to paſs through.

Each Boyling-Pan will require a Furnace, and a Grate under it, but yet one Brick-Chimney paſſing through the Thatch, will ſerve to Convey away the Smoak of the Furnaces of two Pans.

The Fireplace under the Boylers, or Boyling-Pans, is built with Brick, ſquare, ſloping on each ſide like a Ridge or Millers Tunnel, at ſuch a height that a Grate may be plac't 3 foot above the Ground, and the Boyler two foot and three quarters above the Grate.

The ſloping aboveſaid is to be ſuch, that the Grate may be three foot and a half long, and three foot broad.

This Grate is to be made of wrought Iron, the Bars in length according to the Dimenſions above, in thickneſs and in breadth alike, to wit an Inch and a quarter, each of them

to

to ſtand aſunder near half an Inch, and to have two or three Bars athwart under them, to ſupport them all.

The Ground under them is to be the Receptacle for the Aſhes and ſmall Cinders that fall from the Grate, and is to be Arched up like the Mouth of an Oven, that the Fire on the Grates may draw the more vent.

The Grate is to have an Iron Door, at which it is ſupplyed with Coals, and on each ſide another little Iron-Door, called a vent hole, which Doors are to be opened or kept ſhut at pleaſure.

Of Boyling-Pans.

THeſe are either made of caſt Iron, or wrought Iron; thoſe of caſt Iron, may be 7 foot and a half long, 5 foot broad, and 9 Inches deep.

This ſort of Iron is made in *Suſſex*, *Hants*, *&c.* Of it are likewiſe made Iron Guns, and Backs of Chimneys, and it is much cheaper, and fitter for this uſe than wrought Iron, in regard it will ſerve at any time to make Bar-Iron, and is not devoured by ruſt, as wrought Pans are, being as good as Sow-metall.

Some Pans are caſt in four pieces, which muſt be riveted together with Bar-Iron, and the Holes and Cracks ſtopt up with Putty, and the like is to be done when a Caſt-Pan Cracks.

To caſt a Pan, to wit, Bottom and Brims, all in one piece is a Myſtery; ſome that have attempted it, have failed in the ſucceſs, the Air in the running of the Metal, making a hole through the bottom of the Pan, which indeed is at the Surface or top of the Sand. But however it may be thus effected.

Lay two wiſps of Peaſe-ſtraw croſs one another, a hands breadth under the Edges and bottom deſigned in the Sand on which the Pan is to be caſt, ſo that their Ends may come into the Air above the Sand, in which the bottom after the manner of Plummers is ſuppoſed to be turned upward: The Iron when it runs, will preſs the Air, and make it force

a passage with a huzzing noise through the Wisps, avoiding the inconvenience aforesaid.

And Founders affirm, that besides Kitchin-Pots, other large Iron Pots are cast at *Bromwicham*, and at *Pool-Bag-Mill*, within 8 Miles of *Coventry*, and at other places for the use of Metal Men: And here at *London* at *Tower-Hill*, are to be seen deep round Iron Pans capable of holding more than a Hogshead or two, with knobs on their sides to support them, all cast entirely at once, said to be made for the use of Soap-Boylers, and for the refining of Sugar, Salt-Petre, *&c.* and are cast, possibly after the manner of Bells with a vent at the bottom; and one of the Founders Servants alleadgeth, that shallow cast Salt Pans may be made by them after the same manner, of such fitting Dimensions as shall be thought convenient.

A Pan of the Dimensions aforesaid all in a piece, may weigh about 20 *C.* or a Tun.

Wrought Iron is made in the Forrest of *Dean*, and comes from *Bristoll*; 'Tis said to be wrought, because 'tis refined at the Forge, with much Labour and Cost, and not only made into Plates of divers sizes, but likewise into Bars for Wheels, Nails, Locks, Horseshoes, *&c.*

Boyling Pans are likewise made of this Iron, to wit, of Plates 20 Inches square, which are thicker in the middle by a quarter of an Inch, than towards the Edges; These are Rivetted together, till they make a bottom of seven foot and a half, or eight foot square.

The Plates or pieces of the Brims, which may be had of any competent size, are thought convenient to be two foot and a half long, and about nine Inches high. All the Chinks and Clefts are as aforesaid to be stopt with Putty.

A wrought Pan of these Dimensions, may weigh about 7 *C.* or 8 *C.* weight Averdupoize, And according to the Workmanship, be in value from 25 to 30 *l.* sterling of currant Money, which is about 4 or 5 times as much as one of the cast Pans aforesaid of above twice or near thrice the weight.

Of the manner of making both cast Iron and wrought Iron in the Forrest of *Dean*, see *Philosophical Transaction*, N° 137. where the cast Iron is said to be so very brittle that being heated, with one blow of a Hammer it breaks all to peices, quite contrary to the nature of good wrought Iron.

But

But this aſperſion on caſt Iron is far from being generally true.

Of the Boyling of Brine into Salt.

FIrſt, Tis ſuppoſed (as aforeſaid,) that the Brine is by a Windmill-Pump conveyed into large Wooden Veſſels, ſtanding adjacent to the Boyling Houſe called Clearers, for ſhape reſembling Leaden Ciſterns, Cheſts, or a Brewers-Coolers. Theſe Veſſels if expoſed to the Air, as commonly they are, may ſometimes entertain Rain-water, but not long, becauſe they are perpetually filling with Brine, and running by pipes of 3 Inch-boar, (which may be ſtopt at pleaſure with plugs like Spickets,) into the Boyling Houſe, where it is received and conveyed by little Troughs into the ſeveral Boyling-Pans, where this Rain-water is ſoon Evaporated in the Boyling: The bottom of theſe Veſſells, (to render them ſecure from Leakage) are Calked like the Decks of a Ship, And they muſt be placed as high as the Brine may run in a free Current to the Pans as aforeſaid.

And now ſuppoſing the Boylers to be properly ſeated and cemented about with Morter over the Fire-place, to keep in the heat and ſmoak, and then filled; the next thing is to kindle the Fire, which may be done with ſuch large Sea-Coal as will both cake and flame, ſuch are known by breaking and tryal in a Forge, and the ſmall are thrown in at top by degrees, to maintain the Fire, which may be done as well with Peat where it cannot be had.

If the Brine be ſtrong, the Pan need not be quite filled.

After a vigorous Fire has been maintained two Hours or more, and that the Liquor begins to hew, and is ready to kern or granulate, which is known by a little Cream or Scurf at the Top, then it is time to skim, which is done by raking the frothy ſurface of the Liquor to a corner of the Pan, from whence it is skim'd off and put into Tubs like Ale Tubs, with a Tap at the bottom, that after a ſtanding or ſetlement, the Liquor or Brine at the bottom may be drawn off, to ſerve again.

The quantity that may come off from a Pan, may be four or five gallons, but in boyling up or refining of *French* Bay Salt, the dirt and scum is exceeding much.

The next thing to be done is to separate the Sand, All Brines whether of Pits or made of Sea Liquor, or by melting of Forreign Salts, in Boyling petrify and yield a Sand, which cannot be conceiv'd to be in the Liquor before boyling. For a strong Brine hath been dreyn'd or squeez'd through most pure Holland of eight foldings, and no symptom of any Sand was left remaining.

The Pan boyling violently in the middle, this Sand is cast outwards towards the Corners, where in *Cheshire*, and *Worcestershire*, they place small Iron Pans to receive the same; But it being found by experience, that this Sand will fall to the bottom of the Pan before the Salt precipitates, it is with a Board-Rake, Raked to one corner of the Pan, and then taken out with Ladles and put into Wooden Vessels called Pots, like Wheel-barrows, open at one end, which are placed upon Stands or Beams under the Clearers. This Sand is pure white, and resembles a mealy Snow-ball, and being dug and stirr'd, there will run away Brine from it, to be reserved in a receptacle underneath, for further boyling.

This Sand will naturally cake to the bottom of the Pans, and is admitted so to do every boyling, till the same be smooth and fit for the Rake.

And much of it that will stick to the sides is forced off with a driving cutting Hammer, once at least in three weeks, and is made use of for Clods, and Ridges between the shallow Brine Pans.

A Pan may yield two or three Gallons of this Sand, if the Brine be new and foul, which being removed, to make the Salt, hitherto swimming and floating in the Liquor, precipitate or fall to the bottom, shut the two Vent-holes near the mouth of the Grate, and the Door thereof, and then the smoak for want of Vent stifles and puts out the Fire; And after 12 hours time the Salt will be fain to the bottom and become hard, and there will remain a Liquor at the top, which being boyled away, or continually Evaporated renders more Salt.

'Tis uſual to keep Boyling all the Week Days and Nights from Monday Morning to Saturday Noon, and then put out or ſtifle the Fires as aforeſaid, till Monday, and proceed as before.

Were there no other Method, this were in effect to loſe much time and give over Working. To prevent which, in *Cheſhire*, &c. to make the Salt precipitate and fall to the bottom, they uſe Eggs, Blood, Ale, but after much experience the Remedy following was found out, not only to make the Salt ſink, but likewiſe to harden the ſame.

Take Oxe (or Stags) Tallow well refin'd, and melt it, and put it into Lees of Wine, the like quantity in weight or meaſure of each: And this is a good proportion for old Liquor. But if New, there muſt be leſs of the Lees and more of the Tallow.

After the Skimming and taking out the Sand, And that the Fire hath been ſtopt till the Liquor becomes quieted, then uſe the ſaid Compoſition of Oxe-Tallow and Lees: To wit, take the quantity of a Nutmeg of it at the end of a Lath, and turn it round about on the ſurface of the Liquor, till it be ſpent, Then after 2 hours at moſt, open the Vent holes or Doors, quicken the Fire, and Evaporate or boyle away the Liquor, and you will have the Salt lying as it were in a puddle at the bottom, made and fit to be removed. Now to ſave the Pans from cracking or burning, they throw on freſh Coals and ſhut the Door and Vent holes of the Fire place, and the Fire is again ſtopt. Then the Salt is to be raked up to one ſide, taken out and put into dreyning Cribs, which are made like Hay Racks, with looſe Ribs on each ſide to take out, that ſtand ſo near to one another, that there is but room to put in a Mill'd Crown or half Crown, where after it hath lain dreyning in the Boyling-Houſe the ſpace of 6 or 8 hours, it is a pure hard kerned Salt, and may be removed, but yet will continue dripping three Weeks or more, and in the event with Age, (unleſs often moved) will become Rocky.

The Liquor in the Pan which is placed a little inclining towards one corner is called Bittern, which (all but a little to keep the Pan from burning,) is taken out and dreyned away with the Salt, and the Pan immediately filled with a freſh

freſh ſupply of Brine, for another Boyling. And then quickning the Fire proceed as before.

In 8 hours time a Pan of Brine of a moderate or fitting ſtrength will be compleatly made into Salt, with the expence of one Buſhel and a half of Coals, which will make a Pan of Salt, from two Buſhels and a half of Salt, to four or more, according as the Liquor is in ſtrength and goodneſs.

Five Men can attend 12 Pans, 4 of them attend Day and Night, And their Wages is about 11 ſhillings a Week, the fifth attends only in the day time, and his Wages may be ſeven ſhillings a Week or more.

The Liquor that Dreynes from the Salt in the Cribs, is a ſtrong ſort of Bittern, which is received on a Board underneath, that lies in a Channel or waſt Current, that conveys away the Dreynings or Bittern into the Sea.

On this Board will fall ſome ſmall or thin Salt, which after it hath layn and dreyned is ſaved, to heighten weak Liquor.

A Pan may yield from one Gallon and a half, to three or four Gallons of this Bittern, according to the ſeaſon of the Weather the Brine is made in.

The Aſhes being rich with duſt of Coal and Cinder that will burn again, are uſed to make Lime withall, And though not ordinary or commonly known, yet is practiſed at the Lime Kills near *Briſtol*.

And now the Reader ſees what is meant by Sand, Dirt, and Bittern, it is fit to give an account of the miſcheivous effects thereof, in all Salts incumbred therewith: And ſuch are all Forreign Salts made meerly by the Sun, as *Spaniſh*, *Portugal*, but moſt eſpecially *French* Bay Salt. To wit,

1. The Sand, Dirt and Bittern, help to fill up near half the Meaſure,

2. The Dirt is ſo drawn into Fleſh, and ſplit Fiſh, that waſhing will not get it out; And this cauſeth the Fiſhmonger to pare his Cod, to make it look white like *Dutch*-Cured.

3. The Bittern in Refining of *French* Salt, is a Liquor ſeparated from it, that reſembles Sack in Colour, but Gall in Taſt: It will naturally Embody in the Sun, and become a

ſub-

substance like Salt: It may be brought to a Spirit more vigorous than Aqua Fortis, that will suddenly dissolve Cast-Iron, Silver, Gold, or any sort of Metal.

Its Vicious Effects are, Namely,

As to Flesh,

BEsides in general a bad Taste, or a good Relish destroyed, the Moisture, Gravy, and Nourishment, in a little time is rendred as Salt, as Salt it self. Hence the Flesh becomes hard, afterwards very bad or unfit for Food, and at length is mortified or rotten.

As to Fish,

The Moisture and substance of it is so consumed that it becomes Rotten, and will not keep above six Weeks time in a hot Climate; as the Fishmongers alleadged before a Committee of Parliament.

The Consequences whereof, are,

IT causes Scurvies, Consumptions, and other acrimonious Diseases, in the Bodies of Seamen, or Soldiers in a besieged Garrison, that are compelled to the frequent and long use of it.

As to the Sand begot in boyling of Brine, a most skilful Preson in Glass, is about to make Experiments, whether it may not be of use in making of a most pure sort of Glass.

And as to the Bittern, the Honourable *Robert Boyle* Esq; hath made sundry Experiments with it, which we hope he will in due time make publick.

Moreover a learned Doctor of Physick is trying if the same may not be of use in Dying, and if it be mingled with Spirit of Wine 'tis said to be of good use in keeping of a Corps, or Flesh, long from putrefaction. Bittern will

Em-

Embody in the Sun, and make a Body like Salt but uſeleſs.

If a Pan full of it be under boyled, it will all evaporate: *Cheſhire* Salt-Workers call the Liquor that drops from their Salt, being put into Wicker-baskets, Leach Brine, which if boyled will ſpeedily make a ſtrong Salt, but they commonly mingle it with other Brine to haſten the boyling thereof. They deny that their, and *Worceſterſhire* Salt, is incumbred with any Bittern at all, and 'tis granted not with much, in compariſon with other Salts, but it muſt alſo be affirmed, that the fierce fiery and corroviſe Nature found in their Clod and Loaf-Salt, (like Sugar Loafs) is occaſioned, by a plenty of Bittern in them.

Of Bay Salt.

OF the Art of making thereof. ſee *Tranſaction*, N° 51. wherein it is deſcribed to be kerned or granulated in the Iſland of *Rhee*, (to which we alſo add the Iſlands of the Province of *Xantoigne*,) on Marſhes or Sea-Mud by the meer heat of the Sun, in ſhallow Beds or Mud-Pans of about 15 foot ſquare, and an Inch and an half deep, which are filled from Ponds derivative one from the other, of 20 and 10 Inches deep, and ſo gradually decreaſing, thereby to convert Sea-Liquor into a ſtrong Brine, that will kern in the Sun, after the manner of making Brine at *Lemmington* and *Portſea-Iſland*, before deſcribed. (which yet will not granulate without Boyling) and on the ſame kind of Ground, which is ſaid to be a fat Earth neither ſandy nor ſpongy: If the Earth be Red it makes the Salt Grey, if Blew the more White, of the ſize of a Pepper-Corn, but of a Cubical ſhape.

And dry hard Salt of the like ſize, but free from Dirt and ill Qualities, is commonly made in *Portſea* Iſland and *Lemmington* aforeſaid, and it is true both of that Brine and *Bay Salt*, (which is alſo made in the Iſles of *Xantoigne*) that they can make more and better in Windy than in Calm Weather.

Both *Portugal* and *Spain*, being hot Countries, yield Salt made after the ſame manner or on Sand, as at *Ferbo* in *Barbary*, the like of *May*, *&c.* before mention'd.

Salt

Salt ſo made is laid a drying on Beds of Straw, and great heaps of it Thatched and covered over to keep it from Dews and Weather.

As to the Salt of the Iſle of *May*, of which we have ſpoke before, the uſe of it as to *Herrings*, was long ſince Prohibited in *Holland*, the *Dutch* having found by experience likewiſe that *Bay Salt* was too big to be uſed about Butter and Cheeſe, diſcoloured the ſame, and Codd, did not diſſolve ſoon enough thereon, and was improper for *Herrings*, did (it may be preſumed for the three abounding ill Qualities of it, to wit, Dirt, Sand, Bittern, before inſiſted on,) forbid the uſe of it by Law, as appears by a Book Publiſhed by *Simon Smith* Agent for the Royal Fiſhing in 1641, in *Quarto*, Intituled, the *Herring-Buſs-Trade*, expreſſed in ſundry Particulars, both for the Building of *Buſſes*, making of deep Sea Nets, *&c.* With the manner of catching and curing the *Herrings* for Forreign Vent, together with ſundry Placarts or Orders of the *Netherlands*, for the better Government of the ſaid Trade.

In one of them of the 30*th* of *April* 1632, the States of *Holland* and *Weſtfreezeland* acknowledge the ſaid Trade to be one of the principal means of the happineſs of thoſe Countries, and the Regulation and Care of ſuch Trade to be the cauſe of ſuch Order.

The which being well known and conſidered, ſome few Years before his Majeſties happy Reſtauration, an Undertaking was on Foot, to encourage and ſet up a good Fiſhery here, the which in the time of *Oliver*'s *Uſurpation*, &c. miſcarrying in the Womb, and his Majeſty coming in not long after, freſh Collections and Endeavours were on Foot, to Renew, Propagate, and Enlarge ſuch Deſign, and a Committee of his Majeſties moſt Honourable Privy Council appointed to that purpoſe, and at divers meetings of the Privy Council, Affairs of that nature Debated, particularly on the 17*th* of *November* 1663, his Royal Highneſs the Duke of *York* being preſent, Sir *Richard Chiverton*, Sir *William Batten*, and Sir *William Rider*, were by his Highneſs and Council deſired to meet amongſt themſelves with whom elſe they thought fit, to draw up Propoſals for the Advancement of the Royal Fiſhery; Purſuant whereto, they were attended by Mr. *Simon Smith* aforeſaid, Mr. *John King*, and

Mr. *Thomas King*, with ſeveral papers of Propoſals, amongſt which one was,

That the *Hollanders* Laws and Orders about Salt, (and Fiſh) ſet out in the Book called the *Royal Herring Buſs Trade* (aforeſaid) ſhould be printed, and the Fiſhermen to obſerve the ſame (till better could be agreed on,) The which having not been yet done, I humbly digeſt and tender as followeth.

The 28th. *Article whereof is,*

THat no body from henceforward, ſhall dare to ſalt the Herrings with any *French* Salt, either *Seutters, Olderdoms, Buoene, Saint Martin, Brouage, Straight, Weſt-India*, and the Iſle of *May* Salt, upon forfeiture of the Herrings that ſhall be pickled or ſalted therewith.

The 25th. *Article.*

That no Steerſman or others, from henceforwards may carry any Salt to the Sea in their Ships, for to ſalt Herrings therewith, but *Spaniſh* or *Portugal*.

Article 24th.

That no body ſhall put any *Spaniſh* Salt, or *Portugal* Salt in Cheſts, Cellers, or Barrels, before the ſame ſhall be Viſited and Appraiſed by the Rate-Maſters thereto appointed, on a penalty of 25 *per Cent*.

Article 25th.

The *Spaniſh* and *Portugal* Salt to be viewed by the Rate-Maſters, before the ſame may be taken on Board.

Article

Article 26th.

The Steerſman ſhall be bound upon the Command of the Rate-Maſters, to beat open by his Mariners, and to ſhut again the Barrels of Salt: The Ratemaſters each time to have for their Appraiſement and Viſiting each barrel of Salt a Doyte, to be paid the firſt time by the Seller, and the ſecond by the Buyer.

And by the 25th. *Article.*

If a Steerſman ſhall have ſalted Herrings with Salt, not having been the ſecond time Viewed as before, he ſhall forfeit 36 Gilders.

And by the 6th. *Article.*

The Steerſman is to make Certificate of the Quantities of Herrings by him Caught garbiſhed Salted and Packed on board, in due time, and delivered in the Place Appointed: To which, by *Article* 25th. he muſt alſo Certify that the ſame are Salted with good Appraiſed *Spaniſh* or *Portugal* Salt.

Article 27th.

And in caſe of the Rating of the ſaid Salt, any Deceit were found to be done, in the Cask or Cellars, the Vender thereof ſhall forfeit 200 *Carolus* Gilders.

Article 30th.

The Steerſman going for Herrings, ſhall be bound to ſalt the pure Herrings caught after St. *James's tide*, *Bartholomew-tide*, or *Crux-tide*, whereof Men deſire to pack Circle or Burnt, with ſmall Salt Boyled of Salt, according to a Contract made with thoſe of *Colen*.

Article 31th.

No body shall receive any such white or small Salt, but by a due Certificate from the place where the same Salt is made, upon forfeiture of the Salt. The Ship-Master who brings the same Salt from the place where it is made, to certify the same Salt is not altered, nor to their knowledg diminished, since the time they took or received it into their Ships, and that the same is left in being according to the Contents of the Certificate, upon forfeiture of the Salt, in case the Ship-Master is owner thereof; and in case not, upon forfeiture of the value thereof, to be Recovered of his Person, Ship, and Goods, And that he moreover shall be punished for Perjury, according to the former Contract with the Deputies of *Collen*.

The *Dutch* go as far as *Shetland*, a Fishing towards the North of *Scotland*, and so following the Herrings to the *Dogger Bank*, draw nearer home, where the Fish they Catch is to be Repacked, Viewed and Rated, before it be Sold and Exported, only some few Chafers or Drivers, not belonging to those Herring Fishers of *Holland* and *West-Friseland*, are allowed to go to Market with Fish between the 25th. of *June*, and the 15th. of *July*, and are called Summer-Herrings, which are to be spent presently, in regard they are very fat, and will not endure Repacking; here we may say that fat Herrings are kept better with refined Salt.

By the former Articles may be observed, how long they were each year permitted to use *Spanish* and *Portugal* Salt unrefined, and when to use refined Salt. And by the following Articles may be observed how careful they are to send the best Herrings abroad, and spend the worst at home, to wit,

By Article 32. Fresh Herrings brought on Shore are not to be Viewed for Exportation; by Article 33. no other pickled Herrings shall be carried into *France*, *Flanders*, or further Westward, but the Great *Roan* Brandt Herrings caught and packt after *Crux-tide*, (with refined Salt as in Article 30.) Nor shall Herrings be carried to *Bremen*, *Hambrough*, *Collen*, and other Places, salted with course (unrefined) Salt from

from bottom to bottom, these being as well full as shotten, to be Sold for no other but sowre and refuse.

And by Article 33. Packers, Coopers, Wharfmen, are prohibited to pack any course salted Herrings, either full or shotten from bottom to bottom.

From the premises it may be well inferred, That an Assay of Salt to be Established by Law, is in many respects more needful in *England*.

1. Because it is to run too great a hazard of Mens Lives or Wellfare, to salt the Provisions of a Ship or Garrison either with a bad Salt, or ignorantly. And the like may be said of a Fishery Enterprize, whereof most hitherto undertaken have miscarried through the badness of the Salt used.

2. Because there are more sorts of Forreign Salt Imported into *England* than into *Holland*, And why should not the like care be used here as there.

3. Because there are some sorts of weak waterish Salts made bad in *England*, to save Charges, when they might be made dry and good.

4. Because the Virtues and use of the best sorts of Salt are known but to few, consequently little desired; And untill they are, the people are liable to abuse. And such an Assay might be a means to make them more known, at home and abroad.

5. Because for not knowing and using of a good Salt to cure Herrings on board at Sea, the Fishermen have been forced to sell them to their Hosts on shore by Contract to salt, at so low a rate, that they could not live on it. Hence the Coast Towns became much depopulated and impoverished; hence much weak or ill salted Cod hath been dried and turned into Habersdine, that yielded but a very sorry Rate, in comparison of what it might have done.

The assertion as to Herrings is avouched out of a Printed Paper presented to Parliament called the Case of *South-Town*, *aliàs* little *Yarmouth* in the County of *Suffolk*, one Article therein runs thus.

The Fisher cannot sell his Herring to any Man but his Host in greast *Yarmouth*, (which might not be used but only in the case of Merchant Strangers,) nor can he capitulate with the Host for price, but must take what the Host pleases

to

to give for them, by which means the Fiſher oftentimes ſees his Herrings ſold before his Face to Forreign Buyers, for almoſt double the rate he receives.

And in caſe of a plentiful Fiſhing, the Fiſhers are forced to carry their Herrings to *London*, or other Ports at great diſtance, and thereby loſe the reſt of the Seaſon of Fiſhing, or throw what they have taken overboard, that they may return to catch freſh for other Ports, becauſe the Freemen of *Yarmouth* will not Buy them, and no body elſe may.

6. Becauſe by corrupting an Officer, Salt may be Imported from *Scotland*, *&c.* under pretence of being made or refined in ſome place of *England*, And ſo the King loſe his Cuſtomes.

7. Becauſe Ship-Maſters lie under a great Temptation to embaſe, and conſequently embezil and get corrupt Gain, the rather in regard the Laws that enjoyn the regulating of Meaſures, are not obſerved in ſeveral Corporations and Maritime Towns, but illegal Meaſures maintained, and irregular ways of meaſuring practiſed.

8. Though its believed we need not have much bad Salt in *England*, yet without ſuch courſe it will always abound: Moreover the keeping of Salt in Stoves or Hot-Houſes, is to prevent its loſing weight and bulk, whereas by the weight of Salt a good eſtimate may be made of its worth.

Upon experience, a *Winchester* Buſhel of *Portſea* Salt weighed 67 *l.* of *Worceſterſhire* Salt, as in page 7. is alleadged 56 *l.* And of *Newcaſtle* Salt, by the Lord *Breretons* experience 48 *l.* and in *Cheſhire* there are ſeveral kinds doubtleſs much differing in weight, (the bulk being the ſame) of which I have no account, and if the weakeſt Brine there be throughly Boyled, it will (as ſome moſt skilful Saltworkers affirm) render a moſt pure excellent Salt.

Other

Other Arguments for Discouraging the Expence of Bay and Foreign Salts, by imposing a high Duty thereon.

1. Such Salts being granulated only by the Sun, abound with three ill Qualities, Dirt, Sand, Bittern of which see page 55.

2. Bay Salt was formerly Imported in *French* Bottoms, in regard the *French King* laid an Impost upon all Salt made in *Brittany*, and Farmed it out to such as were restrained to Import it in their own Vessels, who paid but 3 *d.* a Wey advance here, whereas *English* Vessels paid 50 Sous a Ton there, by which means the Employment of our Shipping was prevented, and much Bay Salt (albeit prohibited) is frequently Imported under the Notion of *Guernsey* Salt, where there is but little made; under Colour whereof much rich Goods and Liquors are smugled in, and Wool, Fullers-Earth, and Tobacco pipe Clay Exported, contrary to Law.

3. It is a great Impoverishment to the Nation to spend as we do, by a rational Computation to the value of 60 thousand pounds *per annum* in Foreign Salt, which is either paid for in Money, or Returns to that value prevented; whereas we can be furnished with twice as much of our own as we can spend, in regard some of our Brine-springs are inexhaustible, and run to waste, and Salt making in many places is given over for 4 or 5 Months time each year, where it comes to pass that multitudes of poor want Employment, become a Burthen to the Parishes, or instead of being Consumptioners at home, are driven to Foreign Plantations to search for a Livelyhood abroad.

4. Bay-Salt is improper to cure either Herrings or Cod, in heap or in pile on Board, because much especially of the largest of it, though mingled with other small Salts, doth not dissolve soon enough to pinch and save within time; Hence the *Dutch* prohibited the use of it about Herrings. And we have reason to do the like.

1. Be-

1. Becauſe it will be a means to increaſe Fiſhermen, Seamen, and Pilots: For if by reaſon of a good Salt, which pincheth, peirceth, and ſaves quick, Fiſh be well cured on Board, the induſtrious Labourers will reap near double the profit, and need not be compelled to ſell their Fiſh to be cured, to them that have aſſumed a power to ſet a price, which hath been ſo general a Diſcouragement that not one third of the Number go now from *Yarmouth*, the *Cinque-Ports*, and *Members*, as were wont to do. Hence our Maritime Towns are much depopulated, and both them and the neighbouring Countries impoveriſhed for want of the Conſumption, Trade, and Returns by them occaſioned.

2. Becauſe Fiſh cured with a good refined Salt, is not only more acceptable to the Market at Home, but to all Markets abroad, and is ſold at near double the price our Fiſh cured with *French* Salt is ſold at.

3. Divers of the Fiſhmongers Company, met together about *Chriſtmas* 1678, to draw up and Repreſent to the Parliament the vicious Effects thereof, on our own, and on *Iceland* or *Northſea* Cod (and Herrings,) to the end, the Royal Fiſhery Company then about to diſſolve by reaſon of Loſſes by the *French*, *&c.* might be encouraged, and a diſpenſation for Importing Stock-Fiſh might be obtained. The which being prohibited by the *Iriſh* Act *&c.* It came to paſs that his Majeſties Fleet and other Shipping could not at all be Victualled with Fiſh, or at leaſt not till the Royal Fiſhery of the Nation was ſo Encouraged as to proceed and catch plenty of good Fiſh in the *North* and *Iriſh* Seas. The Argument or Plea then inſiſted on was,

That the Fiſhery Adventurers of *Yarmouth*, obtained by an Act of Parliament, 14 *Regis*, Intituled *An Act for the Encouragement of Trade*, high duties to be impoſed on Fiſh ſalted or dried, caught or Imported in Foreign built Ships or Veſſels, with promiſe they would ſupply the City of *London* and other places with good Fiſh, of the ſame kind, to wit, Cod, Coleſh, Ling, Haddock, at moderate Rates, but have not done it, whence there was a want of thoſe Commodities till ſuch time as the Royal Fiſhery Company undertook the ſupply of the Markets in Winter time, at moderate Rates, when the *Yarmouth* Fiſhery ceaſeth.

Hence

Hence the Fiſhmongers for home Vent, craved the Encouragement of that Company, or the taking off the ſaid Clauſe in that Act, and another to the ſame purpoſe in the late *Iriſh* Act, otherwiſe the Markets in Winter-time, (the moſt ſeaſonable for catching and ſpending Channel-Cod,) will be left without ſupply, and themſelves Ruined, or exceedingly damnified in their Trades.

Alleadging withall, that ſuch Clauſe as aforeſaid cauſed the Fiſh of *Yarmouth* to grow exceeding dear, albeit old and ill cured. Of which they gave this Account; to wit, that at the end of *April* each year they ſet out their North-ſea Veſſels to *Iceland* to catch Cod, which they Salt with *French* and other ill Salts, whence it proves Dirty and many times bad, doth not ſell in any Forreign Market except in *France*, or if it doth, with an ill Repute, as if *England* could furniſh no better, and at a price cheaper by 20 *per Centum* than Fiſh cured with a proper Salt, and barrell'd up as the *Dutch* do: Hence it becomes over plentiful at home, and being miſtaken for that which is well cured by the Royal Fiſhery Company, begets an ill Eſteem here alſo, on a Commodity that deſerves high Applauſe. Whereas if good Salt were uſed whether in Pile or Barrelling, they conceived the Fiſhery Trade of *Yarmouth* would quickly be much Enlarged, not only for Expence on ſhore, but for Victualling of Ships, for which *Iceland* Cod well cured is very cheap and proper.

To which Diſcourſe we Annex,

A Narrative of the ill manner of making Red-Herrings at Yarmouth, *imparted by Mr.* Richard Alcorne, &c.

1. THey undertake not their great Fiſhing for Herrings till two Months after the oylie Summer Herrings arrive in the North, which have a rowle of Fat, and no Rows in them, which he beleives may be cured ſo as to diſſolve for Sawce, in imitation of Anchovies; yea the very Pickle of them

Boyled up with ſawce hath given a good guſt both to Fiſh and Fleſh, reſembling the taſt of Anchovies.

2. The Herrings as ſoon as caught are thrown into the Holds of their Boats, and if not carried forthwith on ſhore freſh, are ſalted with Bay or *French* Salt. One ſcatters Salt with a ſhovel on the thick Heap, another turns them with another ſhovel, and ſo continue till ſalted enough for preſent Preſervation.

3. When the Boat hath a ſufficient quantity, the Maſter carries them on ſhore to his Hoſt, and there delivers them to him, according to a price the Town ſets.

4. Many of theſe Fiſh are bad, becauſe the Salt is of ſuch an irregular ſize, that the third part of it doth not diſſolve in proper time.

The beſt of them are barrell'd up with Salt and Pickle for Exportation, and yet theſe as being ſalted with improper Salt, can neither keep long for hot Seaſons or Climates, nor for very long Voyages, for the Bittern peirceth the skin, draws forth the Oyle and Moiſture, and in length of time brings the Subſtance to a Mortification or kind of Rottenneſs, yea in a ſhort time renders it dry and hard.

The worſer ſort or bad ones, (to prevent the loſs of them,) are deeſed over a Wood-fire, and are thereby dried and rendred Red, or Red-Herrings.

Some of theſe happening amongſt Salt of too large a ſize prove ſtinking, and when they come to the deeze, drop from their Heads, and are afterwards tied taile to taile, till very home dryed, and then are barrell'd up with the reſt and ſent to Market, which irregular covetous practiſe deſerves an Aſſay, having been a great diſparagement to the Trade, and moſt of them when they come to be Broyled and eaten, prove dirty coloured, dry, and by reaſon of the ill quaſities of the Salt.

Thoſe that are overdry and overſalted, will upon tryal of bending, either prove very ſtiff or crack.

Whereas 'tis conceived if good or well cured, vaſt quantities might be ſold at home and abroad, more than now are, and become a ſtaple Commodity of great uſe and repute.

The

The Reader may eaſily believe theſe Aſſertions, in regard a barrel of Red Herrings coſts more, and yields leſs, by ſix or ſeven ſhillings than a barrel of white pickled Herrings.

To Remedie which Inconveniences, it is aſſerted and propoſed.

1. THat the Herrings that Arrive in *Auguſt*, being more fat and oily than thoſe that come later, are moſt proper to make Red-Herrings.

2. That theſe being caught at Sea, be immediately ſalted with the beſt ſort of *Engliſh* refined Salt, and if caught far off barrell'd up, ſo as to keep for two or three weeks time or leſs, till the Veſſel can Arrive on the Coaſts, or in the *Thames*.

But if caught near, ſo as to be carried on Shore within ſix or ſeven days more or leſs, then they need not be barrell'd, but being firſt ſifted in Salt to be laid in a lay, and Salt ſifted thereon, and ſo for more lays one upon another, till they become a Heap or Pile according to cuſtom.

3. That they be ſuddenly put into the Deeſe, and well or ſufficiently Deeſed, and they will be effectually rendred Red-Herrings, with all the properties of good ones. To wit, they will be well ſeaſoned, comparatively freſh, red, fat, oyliſh, ſoft and plyable, ſo as to bend about the Fingers, without cracking or breaking.

4. Our *Yarmouth* Men may rather thank than reprove Mr. *Alcorne* for this Digreſſion, he did it to prevent the loſs of their Fiſhery, which may be ſupplanted by one in *Ireland*, where the *Scotch* Boats every year carry away from *Dublin* about ſixty thouſand pounds ſterling for Salt and Herrings, as hath been made appear, long ſince to the *Lord Deputy* and *Council*, on which an Act was prepared, for the Eſtabliſhing a Corporation for the Herring-fiſhing at *Dublin*, where and generally on the Coaſt the Fiſh being much larger, fatter, and arriving ſooner than ours, are more proper for Herrings Red or Pickled; and by reaſon of their cheapneſs, may in time certainly ſubvert the Herring-Fiſhery of *England*: We now proceed to argue againſt *French* Salt.

5. Bay Salt is improper to cure Flesh withall, because in time it renders the Meat dry, hard, dirty, rotten, and by reason of the Bittern in it, consumes the goodness or nutrimental part of the Meat, as moisture, gravy, &c.

And this comes to pass not only from the ill quality, but also from the overlarge size of this Salt, so that about one third of it dissolves not in proper time, but continues so long a dissolving, until all with it, is almost as Salt as Salt it self; Hence excessive quantities of it must be used, whence great remains of it are wasted and found at the bottom of the Lask, which is not fit to be used again, yet in the Pilchard Fishery is thrown by for second and third uses, but being once wet with the blood of the Fish is continually wasting, near as much as if in use. Whence one Bushel of good Salt of a regular size, though one half dearer than *French*, will turn to a cheaper account.

6. The *Dutch* Mariners returning from long Voyages, look fat, healthful, and fresh Coloured, because their Flesh and Fish is saved with refined Salt. Whereas on the contrary our Mariners feeding on Provision cured with Bay Salt, are scorbutick and incombred with acrimonious Diseases.

Objection.

The Masters or Refiners may Alledge, that Foreign Salts may be cleansed of three ill Qualities, Dirt, Sand, Bittern, that is, by making Salt upon Salt out of them, after the *Dutch* manner, and that for want of such Salts to Refine, they and many Labouring poor People under them shall be undone, and that some parts of the Nation are too remote from Saltworks of our own, which caused their undertaking.

Answer.

1. Foreign Salt may be had from our own Plantations of *Antego* and *Jamaica*, as also at the Isle of *May*, *Tortudes*, &c. for fetching, or very little charge.

2. The Discouragement only, but not the Exclusion of Foreign is intended. To which it may be objected, To what end should we Trade in it then?

Answer,

Anſwer, The *Dutch* Traded for many Ships Ladings of it yearly, not to ſpend for their own uſe, but to furniſh Northern Countries therewith, eſpecially *Sweden*, where it ſeems by a late Gazette they had no Native Salt, but now of late have Diſcovered Brine-Springs. To promote the Exportation of it when here, all Duties levied on it ought to be Repaid.

3. *Spaniſh* and *Portugal* Salt beat to Powder, do not ſo much either diſcolour Butter and Cheeſe, nor conſume the Gravy, Moiſture, and goodneſs of Fleſh and Fiſh as *French* Salt doth. Wherefore theſe Salts being better to Refine, and alſo procured in Barter, ought to have a leſs Duty impoſed on them than *French* Salt, whereas on the contrary that pays but 1 *s.* a Wey Duty, and *Spaniſh* and *Portugal*, 1 *l.* 4 *d.*

The goodneſs of Salt made from Brine, raiſed by the Sun from Sea-Liquor, purged and embody'd by Fire, aſſerted.

SUch Salts as are made at *Lemmington* at divers Works, and in *Portſea Iſland*, on the Works of Mr. *Richard Alcorne*, and Mr. *Pits*.

Portſmouth it ſelf ſtands on a peice of Land that probably was formerly an Iſthmus, now an Iſland, of about ſeven Miles Compaſs, being Banked on ſhallow Places on the North ſide, and is called *Portſea Iſland*, which is entred by Land on that ſide over a Bridge called Poſtbridge.

On the Eaſtward part of this Iſland there is Land recovered from the Sea by aid of a Bank, about 3 Miles from *Portſmouth*.

Mr. *Pits* hath a ſmaller, but the more Ancient Work thereon, Mr. *Alcorns*, is a Work on 80 Acres, part of 300 Recovered from the Sea about the year 1666: And though all theſe Salts (if there be good care and skill uſed in Boyling) may be alike or near alike in goodneſs, yet having had moſt Experience of Mr. *Alcorns* Salt, we ſhall give it no more than its due praiſe, and he deſerves no leſs, for imparting the former Diſcourſe about Banking the Ground and making

Salt

Salt thereon, fit for all Intents and Purposes, which is proved from the Qualities and Effects thereof.

First, from the Qualities thereof.

1. IT granulates or kernes to any fitting desirable size, small or great, and of it are made Cloda or Sugar-Loaves. And on one part of the Ground, is made a reddish Salt that serves to salt gammons of Bacon and Neats-Tongs, and renders them Red.

2. It hath also the properties of good, Namely it is white, hard-kerned, weighty, a(*Winchester* Bushel of it weighed 67 *l.* and an half, Averdupoise,) dry, and so keeps in moist weather, and grows Rocky, of which there is an instance in the Warehouse of the Royal Fishery Company at the Red-House at *Deptford*, where for two years together hath been Lodged about 26 Wey of it; which, when occasion came to use, was found a hard Rock, and picked up with Pickaxes.

3. It is free from Dirt and Sand, and that drying, burning, corroding, mortifying quality, called Bittern

Secondly, from the Effects.

AS to Flesh, the ordinary method of salting Meat for long Voyages is hereby altered, rendered more speedy, and less chargeable, and the Meat much better and longer preserved. Of which methods hereafter, in Directions for using this Salt.

This Assertion is confirmed by manifold Experience.

1. Mr. *Pits* Asserts, he furnished Sir *Dennis Gauden* late Victualler of his Majesties Navy, divers years with this kind of Salt, which cured the Provisions without any blemish or Complaint.

2. Mr. *Alcorne* Asserts, he will prove before a Committee of Parliament when needful, that the Provisions for the Navy at *Portsmouth*, have been excellently well cured with this Salt.

3. He

3. He aſſerts that *Iriſh* Beef and Neats Tongues have been ſalted two years therewith, and then Eat better than they could have done, if they had been ſalted but two Months with any corroding or waterish Salt. Alſo that it hath cured Salmon for long keeping.

4. About three years ſince, two Hogsheads of Beef, and two of Pork, were ſalted at the Victuallers Office on *Tower-Hill* with this Salt, according to the new Method. And that the Brine in the Cask being often proved, was from time to time found very good, and conſequently the Meat the like, but of this I expect a better account hereafter.

5. How well it hath cured Bacon and Pork that was ſent up to Mr. *Binglos*, Merchant in *Abchurch-Lane*, hath been before mentioned in page 11.

Divers Bacon-Men of *Kingſton* and *Hamm*, that uſed to ſalt Beef, Pork, and Bacon, with this Salt, about three years ſince atteſted the goodneſs of it, before a Committee of Parliament for the Fiſhery, whereof Sir *Henry Ford* was Chairman, and if it were needful its goodneſs might be atteſted by ſome Cook, and by divers Butter-women, Bakers, and a Deluge of others.

6. Beef hath been ſalted with it for an *Eaſt-India* Voyage, carried thither, and at 20 Months end brought very good back, whereof four Hogsheads was Sold to one Mr. *Robert Forth*, for a *Barbados* Voyage. Of this one Mr. *Parke* is ready to give Teſtimony when needful.

To Experience, Reaſons may be added, why Fleſh Salted with this Refined Salt, is cured with leſs Caſualty, will keep longer, and be more valuable and acceptable, in hot as well as in cold Climates, than that Cured with French *Salt or any other not Refined.*

1. IT is cured with leſs Caſualty, becauſe in the new method of Salting and Packing, hereafter deſcribed, the Brine makes the Salt packed with the Meat, ſearch all places neglected on haſty dry Salting. Whereas in the ordinary or old method, the moiſture of the Meat and Brine running away, there

there may happen the loss of Salt from many Concavities, before it hath had its desired Effect, although it lies till some parts of it be oversalted. And if one pound of tainted Meat happen in a Caskful, it will by the Brine be communicated to every part, and so the whole quantity to the sense of smelling be rendred corrupt.

2. It will keep longer, because this Refined Salt is Balsamick, and free from the Drying, Burning, Corroding, Mortifying quality, so often formerly mentioned and called Bittern, the Spirit whereof will dissolve the Bodies of Animals, Vegetables, Mettals, and therefore unseparated (as it is in all Salts embodyed by the Sun) causeth Meat long salted therewith to seem rotten, and will so far embase the best stall-fed Beef, that Grout or course Bread will be more healthful and strengthening Food than it.

3. That Burning Corroding Quality consumes the most nutritive part of the Meat, namely the Juice and Gravy, and succeeding in the room thereof, enflames and corrupts the Blood, whence ensue acrimonious humours, and Diseases in the Body.

4. Meat salted with this Refined Salt is more acceptable, because it hath its natural moisture, its pristine size, proper Taste, and genuine operation, and is not dammaged by much more Age than the longest of Voyages can require; if kept constantly in good Pickle, or dry Salt; Neither doth Meat well saved with this Salt, grow very much the salter for long keeping.

As to Fish. First Herrings.

1. THe Royal Fishery Company have caught some thousands of Barrels, and salted them at Sea with this Salt, the greatest part of which were sold in *Holland*, by Mr. *Panser* of *Rotterdam*, and the rest at home, and never any of them were yet complained of, as ill salted or cured: Yea being salted at Sea as soon as caught with that little Blood they have, do not Eat near so salt as those salted, and repackt with *French* Salt.

2. Mr. *Binglos* a Merchant in *Abchurch-Lane*, put some Herrings that were caught at *Michaelmas*, on Board a Ship

in

in *May* following, which carried the Right Honourable the Earl of *Carliſle* firſt to *Barbados*, and afterwards to his Government of *Jamaica*, His Lordſhip taſted the Herrings near the *Barbadoes* and liked them ſo well, that he was pleaſed to give an account how well they proved, and to direct his Secretary to put him in mind to write to his Majeſty to give encouragement to this kind of Salt; part of the Herrings were carried to *Jamaica*, where after 6 or ſeven Months they were ſpent by his Lordſhips Servants, and were as good as any whatſoever, and eſteemed a Rarity.

An Objection was made at a Committee of Parliament, that no Salt whatſoever would preſerve Herrings and Cod for above ſix Weeks time in a hot Climate; But this inſtance, and conſiderable quantities that the *Dutch* formerly Shipt off to *Brazile*, and thouſands of Barrels of ſplit-Herrings and Mackarel yearly ſhipt from *New-England* to the *Barbadoes*, and there ſometimes kept two or three Months before ſpending, and *Berwick* Salmon that kept good to the *Eaſt-Indies*, are a ſufficient Anſwer to the Objection as to both ſorts, in regard Herrings require a better Salt than Cod.

3. The ſaid Mr. *Binglos* kept Herrings two years, ending at *Michelmas* 1680, that were caught by the Royal Fiſhery Company, which ſo long after proved moſt excellent good, tender, and not over Salt. At length his Maid thinking that her Maſter did not regard them, gave them away to poor People, having no precept to the contrary.

As to Barreld Cod.

THat which the Royal Fiſhery Company caught at Sea, they ſalted with this *Portſea* Salt, and ſold moſt of it to the Fiſhmongers Company, who will atteſt when it is needful, that it was as well ſalted, white and good, as could be expected, and deſired the Fiſhery Company to uſe no other kind of Salt, which they would not be drawn to, albeit they might have it much cheaper.

Arguments for the Encouragement of Engliſh *Salt, and hindring the Expence of Foreign.*

1. IT will Employ multitudes of poor Labouring People, in Recovering waſt Lands from the Sea, in Banking

or Encloſing the ſame, in making and boyling of Brine, whereby they become Conſumptioners of our Native Commodities, and be enabled to pay Taxes towards a neceſſary War if ſuch ſhould happen.

Whereas, as the Caſe ſtands, thouſands have quite given over, or Work but half the year, for want of Vend, and by ſuch means are forced away to the Plantations, live on the Alms of the Pariſh, or are compelled to Beggary or worſe.

2. It will Employ many Smiths, and conſume much Iron for Pans and Grates.

3. It will Employ many Carpenters, Smiths, Brick-makers, Brick-layers, to Build and repair Houſes and Furnaces, and to make Carts, Barrows, and Cribs to remove away and ſtore up Salt in.

4. It will Employ much Shipping and Mariners to fetch Coals, and to tranſport Salt, and conſequently increaſe our ſtrength in Mariners and Shipping.

5. It will Enrich the Nation, by preventing the needleſs carrying out of Money, to pay for *French* Bay Salt, and other Salts, which formerly in time of War in the years from 1627, to 1630, was ſold here from Eight to Ten ſhillings a Buſhel, whereas our own being a Native Commodity will be always at a moderate price. And albeit it ſhould be dearer than Foreign, yet as aforeſaid a much leſs quantity will ſerve to better purpoſe.

And both then and ſince many Ships went yearly in their Ballaſt to fetch Bay Salt, but of late ſince we obtained a good and cheap Manufacture of our own, it is faln to a very low price, to wit, 10 *d.* or 12 *d.* a Buſhel, on purpoſe to undermine us; whereas not many years ſince in times of Peace, it was uſually ſold at 4 *s.* a Buſhel.

6. *Engliſh* refined Salt is better and much cheaper than any the *Dutch* can furniſh themſelves withall. And when its worth is known, its poſſible it may become a Staple Commodity, to furniſh not only the *Northern* parts withall, but alſo *Ireland*, *&c.*

OF

ICELAND.

THis Treatiſe being cheifly intended for the promotion of the Manufacture of Salt, (and Fiſhery,) I am next to diſcourſe of the uſes thereof, in curing and ſaving both Fiſh and Fleſh; The year in the Law account, begins at *Lady-Day*, and about that time our *Yarmouth* and *North-Sea* Fiſher-Boats ſet out to the *North* of *Scotland*, and to *Iceland* for Cod, of which *Iſland* meeting with no ſatisfactory Account in Print, and having made many Inquiries, and held long Diſcourſes with divers Maſters of the Doggers of the Royal Fiſhery Company, to wit, Captain *Arnold Padget*, Mr. *Cloudeſly Cooke*, Mr. *Joſeph Bond*, Mr. *Robert Payne*, Mr. *Joſeph Fiſher*, Mr. *Timothy Fowler*, who have Fiſhed many years there and Sailed round it: They give the following account of the Commodities of the *Iſland*, and of the manner of the Inhabitants living there.

The Place is a Rough Hilly and Snowy Land or *Iſle*, called *Iceland*, either from the great quantities or Mountains of Ice that in thoſe Seas are floating *Southwards*, till they prove hollow or ſpungy underneath, and by their Colliſions break aſunder, and become ſmaller and at laſt overſet and diſſolve, or from the perpetual Ice and coldneſs of the Air, which is there ſharp for eight Months together.

One *Robert Payne*, Maſter of a Barke called the *Jewel* of *Yarmouth*, was in 1658 about nine days encloſed amongſt the floating *Iſlands* of Ice, and eſcaped with great hazard.

The *Iſland* it ſelf is large, to wit, about the bigneſs of *Ireland* Mountainous, having a Ridge running through it, *Fournier* ſaith it reacheth in Latitude from 64° to 68°, but the Maſters abovementioned ſay this is a groſs miſtake, that the moſt Southwardly part of it is *Ingulf-foot* in 64° 25′ of North-Latitude, and the moſt Northwardly part is *Rag-Point* in Latitude 66° 5′, Whereas the *Atlas* alſo makes part of the

Iſland above a degree to the Norrhward of the Artick Circle, which is a groſs miſtake, refuted not only by Obſervation, but alſo by the *Suns* continuance two Monhts above the *Horizon* in the middle of *December*, in the *Northward*-moſt part of the *Iſland*.

This *Iſland* lies *Northweſtwardly* from the *North* of *Scotland*, to wit, from the Start or head Land of *Orkny*, to *S. W.* head of *Fero* is 55 Leagues diſtance, and from thence to *Ingulf-foot* on the *Southſide* of the *Iſland* it is 85 Leagues more.

The *Iſland* hath 4 remarkable Mountains in it.

1. To wit, *Ingulf-hill* on the *South-Eaſtſide*, the Top whereof may be ſeen afar off at Sea againſt bad Weather.

2. *Hackaford*, on the *N. W.* ſide two Leagues from the Sea of a great height.

3. *Snowhill* on the *N. N. W.* ſide, the plain Land there being called *Rook hill*.

4. The famous burning Mount *Hecla*, about the middle of the *Southſide* of the *Iſland* 60 Miles or more from the Sea.

Some others of them are ſaid to Burn and be always covered with Snow, but this being the moſt Eminent, we ſhall be the more large in diſcourſe about it.

Out of a little Book intituled *Geologia Norwegica*, tranſlated out of the *Daniſh*-Tongue by *Daniel Collins*, and Printed in 1663, the Author of it being a learned Miniſter, we have the following account.

Mount Hecla, by the Inhabitants called *Heckleſield*, Burns continually with a blew Brimſtonelike, and moſt dreadful Flame, caſting up and beſtrowing the Fields round about, with ſuch great quantities of Brimſtone, that divers Ships may yearly be Laden off with it; and it oft times ſtrews the Land with ſo many Aſhes, and other burnt Stuff, that the Country for the ſpace of ten Miles round about, can yield no profitable Increaſe; and when it Burns with greateſt Vehemence, (for it Burns ſometimes more feircely than others) it makes a terrible rumbling like the noiſe of loud Thunder, and a fearful cracking and tearing, that may be heard a long way off by the Inhabitants.

Martineire in his *Northern* Voyage tells us page 134, that himſelf and another, having two Guides, and being deſirous

to

to ſee and aſcend *Mount Hecla*, travelled for two days together over Mountains craggy and unfrequented ways, and when they were within a League and a half of it, found the Ground all covered with Aſhes and Pumiceſtones, over which they were forced to March towards the bottom of the Mountain, the Sky being Serene, and no flames to be ſeen, they took a reſolution to go up it, but the Guides informed that if they paſſed any further, they would run great hazard of ſinking into the holes the Fire had made, from whence there would be no likelyhood of recovery.

However he and his Companion Marched over the Aſhes and Pumices, (mid Leg deep) towards the Top, where they ſaw a great number of Birds flying up and down as black as Pitch, and they were *Ravens* and *Vultures* which build there.

Being got about half a League up the Hill, they found it begin to tremble under their Feet, and heard a ſtrange Craſhing and Rumbling within, which argued a Hollowneſs, and gave them no little fear of ſinking into it: At the ſame time round about them they perceived great Chinks, out of which Flames and Sparks came forth, which were noyſome and ſtunk like burn'd Brimſtone, which frightned them ſo much, that they got back as faſt as they could, for fear of being Swallowed.

Being got about thirty paces back, a Cloud of Aſhes broke ſuddainly out of the Mountain, (ſo big and thick it obſcured the Sun,) and fell upon them in ſuch manner, that they could not ſee one another: but that which frighted them the moſt, was to ſee every moment new guſts of Fire and Aſhes break out freſh and fall upon them like Hail, with a continued noiſe and rumbling under them, that their fear added Wings to their Feet.

They ſaw a Pumiceſtone about the bigneſs of a Hogshead, which had been thrown from that Mountain a little before, and whilſt they were admiring how it ſhould be poſſible, one of the Guides affirmed, he had ſeen much greater, and among the reſt, one which ten Men were not able to move; and affirmed moreover, that beſides the Flames, Cinders and Aſhes they had ſeen, that the Mountain throws out ſometimes ſcalding hot Water, ſometimes flames, ſometimes Fire, and ſometimes nothing but Stone.

Iti-

Ittigius in Lucubrationibus de Montium incendiis, relates the like Story of *Dithmar Blefkins*, who ſpent 4 days in Viewing and aſcending this Monntain with no better ſucceſs; the ſtory whereof is in Engliſh in *Purchas's Pilgrims*.

We read in *Geologia Norwegica*, That in *Anno* 1626, this Mountain of *Heckleſield* broke out with ſuch a Flame, that it caſt terrible and unuſual peeces of Fire out, which flew round about a great way, and the Aſhes ſome hundreds of Miles; and ſaith the Author, was ſeen in the *Northwa*[illegible] moſt parts of *Norway* which ſeems impoſſible, yet it is related for certain that it was ſo.

They have hot Baths on the *Weſt* ſide of the Land, particularly one 17 Leagues from *Snow-Hill*, in a Harbour called *Lowſy Bay*, which iſſues from a Rock, about which they uſe to make a Mound or Pond of Rock, Stones, Flags, and Earth, till it be deep enough for a mans body

In the *Philoſophical Tranſaction*, N° 103, Dr. *Paul Biornonius* residing in *Iceland* informs us, that they abound with hot Springs, of which ſome are ſo hot, that in a quarter of an hour they will ſufficiently Boyle great peeces of Beef, which is thus ordered. They hang Kettles with cold Water over them, in which they put the Meat to be Boyled, for fear of either Burning or throwing up the Meat, by the fervent and vehement ebullition of the hot Waters: Theſe Waters do harden and petrify about the brims of the *Therma*.

Arngrim Jonas, one of the Writers of the ſmall *Duodecimo* Books called *Republicks*, whereof there is one for each Kingdom or Government, gives a much larger Deſcription of it than is to be found in any *Atlas*, where the Reader may meet with an Account of the time, when it firſt came to be Inhabited by the *Norwegians*, which he aſſerts to be in *Anno* 874, and was afterwards repleniſhed by the *Danes*, under whoſe Governmet and Religion it now ſubſiſts.

The *Iſland* is well Peopled, but the Inhabitants live only in the Valleys and towards the Sea-ſhore.

Their

Their Dwellings deſerve not the name of Houſes but Caves, contrived to avoid the vehemence of Winter, and are commonly made in the Vallies at the feet of Mountains, over little Springs or Currents of Water wherewith they abound; the Walls or Sides are made of Stone, and Rocks with Flags between them.

The like may be ſaid of their Churches, The Ridges of both appear but a little above Ground, are made with Rafters and Boards, and are covered over with green Turf; Neighbours ſeldom have their Houſes Contiguous, neither are there many of them as one may ſay in a Village together, yet the Habitations of ſome of the Gentry are Wainſcotted within.

Of the Inhabitants.

THey are a luſty, comely, affable People, accounted ſincere in their Dealings, addicted to Learning, having three Univerſities (ſuch as they are,) and divers of them have Travailed far; They are long Liv'd, Healthful, their Drink and Food being but mean, as we ſhall hereafter intimate.

The Diſeaſes they are moſt ſubject to, are the Cholick and Leproſy, they have no Phyſicians (as not allowable by Law) ſaith *Fournier* in his little *Geography*.

Some few Chyrurgeons they have for the Curing of Wounds.

Much of their Dyet eſpecially in Summer-time, begets upon them ſuch a ſlime, Leproſy or Scurf, as peeles off after change of Dyet in Winter.

Of the Weather

THe Aire is healthy all the year long, the changes of Weather are uncertain, nor do they fall out according to the four Seaſons of the year, ſometimes it Snows as well as Hails in the midſt of Summer, and the Winds blow, now and then moſt furiouſly in that Seaſon.

Though

Though the Weather be ſharp for eight Months together, yet moſt part of the Winter the poor Fiſhermen that cannot purchaſe Boats of their own, (on which account they are in great Bondage to their Employers) Fiſh in the Harbours, yea and ſome of our *Yarmouth* and *North-Sea*-Boats Fiſh there in the Winter-time in *December* and *January*, *&c.* And make two Voyages in a year, Complaint thereof being made in Parliament (as Deſtructive to the young Fry,) begot the following Clauſe in an Act 16° *Regis*, *Car.* 2. *Chap.* 16. Intituled an Act for *Regulating the Herring and other Fiſheries*, and for *Repeal of the Act concerning Madder*, *viz.* And for the "better regulating of the *Iſland* and *Weſtmony* Fiſheries, and "preſervation of the Spawn of Fiſh there, it is Enacted that "from and after the 25*th.* of *October* 1663, No Ship or Veſſel "ſhall proceed upon a Fiſhing Voyage for *Iceland*, or *Weſtmo-*"*ny*, out of any Port, Haven, or Creek in *England* or *Wales*, "or out of the Port of *Berwick* upon *Tweed*, until the 10*th.* of "*March*, upon the forfeiture of every ſuch Ship or Veſſel, with "all her Furniture, Tackle, and Apparel, and of all Fiſh caught "in ſuch Ship or Veſſel.

Of their Commodities.

1. THey abound with great plenty of Sheep, Cows, Bullocks, Horſes, with admirable Paſture Ground in the Valleys.

2. Great plenty of moſt ſorts of Sea-Fiſh, all the year, round their Coaſts.

3. They abound with many Lakes on high Mountains, well ſtored with freſh-Water-Fiſh, and with Rivers well ſtored with Salmon, and Salmon-Trouts, of which they ſometimes take 20 or 30 at a draught.

4. In Summer-time they have great plenty of Wild-Fowle, as Mallard, Ducks, Teal, Partridge, Wild-Geeſe, Plovers.

5. In Winter time, they have Ravens, Eagles, Wild-Ducks, Swans.

Of

Of the Commodities they want.

1. THey have no Coals, Wood, or Trees, for Fuel or Building.

Some very few Sallows and Birch growe there, but not above half the height of a Man.

2. They have no Corn or Grain whatsoever, consequently no Wheat, Barly, Oates, Pease or Beanes, consequently no Beer; some few Berries they have called Asbberries or Anberries.

3. By consequence (as 'tis likewise most certain upon Evidence,) they have no Swine, Hogs, nor Poultry, consequently no Hen-Eggs, albeit possibly some few Hens may be kept upon Corn Imported by the Gentry.

4. No Hemp or Flax, consequently no Linnen.

5. No Salt, Glass, or Metal, consequently no Lead, Tin, Iron, or Copper.

6. No Fruit, good Roots or Flowers, except Dasies and Cowslips.

7. No Townes, Markets, Trades, or Shopkeepers.

Now these being their Defects, we shall Expatiate in shewing how they are supplied.

1. THe want of Coals and Fewel is supplied by Turf, which they have in abundance, Cow Dung, *&c.*

The want of Timber is supplied by great quantities that drive a Shore in *Blackbay*, and on *Ragg* and *Langlies Points*, on the Northward most part of the *Island*, conceived to come from an *Island* called the *Groyne*, and what more they want is Imported.

2. Their Drink is Milk mingled with Water, In Winter time they are forced to drive their Cattle into their Caves, and there fodder them with Hay; and many People barrel up Milk for a Winter supply, when the Cows can yield but

ſittle, for before they are driven out into Paſtures they are almoſt famiſhed, and reduced to exceeding Leanneſs.

They feed on the Ground from *March* to *Midſummer*, or longer before they are fit to Sell to ſuch Ships as Arrive, The Inhabitants kill them not till about a Fortnight after *Michaelmas*, and then cutting the Fleſh into Collops, the Froſt will ſave it, and theſe they alſo Smoak-dry in their Caves or Stoves for Winter-Food, which is good Broyled upon Coals.

When they Broile them they Butter them, and indeed *Iceland* affords incredible plenty of Butter, as is mentioned by *Olaus Magnus*, *Fournier*, *&c.* which they crowd into large Fats and long Cheſts without Salting it, and it will have many Colours like a Rainbow, our Seamen think it not ſo good as Kitchinſtuff.

Some few Cheeſe Curds they make, but I do not hear of any Cheeſe.

Moſt of their Sheep they fodder in Winter time, in other Caves adjoyning to thoſe they dwell in, and ſome of their Sheep and Horſe make a ſhift to live upon the Graſs under the Snow, and the *Coralline Moſs* called *Muſcus-Marinus*.

If a Sheepe, Cow, or Bullock, die a natural Death, it is accounted Veniſon, and I am informed, that ſometimes they take out the Guts of a Cow or Bullock, and leave him ſtanding in his Skin on his Legs, or propped up in the Air or Froſt all the Winter to be Eat the next Summer, and this is accounted a Rarity, becauſe it is an Adventure, in regard of Bears that come over upon the Ice from *Groenland*.

Of their Fiſhing.

THeir Bread is Cod caught in Winter-time, and dryed in the Froſt, commonly called Stockfiſh.

In the Summer-time they catch much of it, wherewith they make moſt excellent Haberdine, after the manner of Poor Jack at *Newfoundland*, and out of theſe Commodities Fleſh, Oyle, Wadmall, and Brimſtone, the King of *Denmark* raiſeth a conſiderable yearly Tribute, keeps Officers on Shore to Collect

lect it, and yearly ſends 7 or 8 Saile of Ships from 60 to 100 Tons, to *Wacklingford*, *Weſtmony*, *Ireford*, and other Havens to fetch the ſame, and to keep the Inhabitants from trading with the Subjects of any other Prince, which they cannot do, but in ſuch Harbours where theſe Ships are not, and there Wheat, Barly, Linnen, Salt, Iron, Tobacco, *&c.* are good Commodities to put off in barter for Wadmoll, Sheep, Beef, *&c.*

Sometimes notwithſtanding where theſe *Daniſh* Ships are, ſome of our Shipping may put into ſafe Harbours to avoid Stormes, and by leave of the Commanders, may barter ſome Commodities with the *Iſlanders* for Provſions.

Our Fiſhery there is ſaid to be reſtrained by the King of *Denmarks* Grant or Patent, to be no nearer the ſhore than within ſight of Land, yet multitudes of Fiſhery Veſſels, both of Strangers and Engliſh Fiſh there.

The *Dutch* notwithſtanding have the Priviledge to Fiſh in ſome of their Harbours, for Grampuſſes, and Dubartas, which is a baſtard kind of Whale.

Their Bread is alſo another ſort of Fiſh, called Hokettle, or the Nurſe-Fiſh, which hath a ſharp Ridge on his Back that cuts aſunder Fiſhery-tackle, which often times doth Inconvenience our Fiſhermen, ſome of theſe Fiſh are very large, and may weigh three or four Tons.

A Fiſh may yield two or three barrels of Livers, of which they make Oyle to burn in their Caves underground, the other parts they cut into pieces, and Bury them four or five Weeks under Ground, then waſh them, and dry them in their Stoves, which is afterwards ſold to the Neighbourhood as a valuable Commodity at about 6*d.* a Stone, and this ſerves inſtead of Bread, and if it be broyled on the Coals, it ſerves for Meat.

Of the Skins of this Fiſh they make their Shooes.

Our Mariners often catch this kind of Fiſh, and having obtained the Livers, drag the Body on Shore, where it will procure two good Sheep worth Nine ſhillings in barter, very large like Calves, able to bear a Man on ſtride, and as fat as Porks, the want whereof is ſupplied by other Fleſh.

A Sheep that naturally Dies, or is frozen to Death, is esteemed a great Rarity. Linnen, the better sort have in barter; The general Employment of the People is either Fishery or the making of Wadmoll, which is a course sort of woollen Cloth, made of their Sheepes Wool or Hair; Of which Cloath, they make Gowns, Coats, Capps, Mittins, and other wearing Clothes, sold by Slopsellers to Seamen and Fishermen.

But Breeches, Boots, and Stockins, they make of the skins of the Sheep, the hair being shaved away.

Also their Garmens next the skin and their Bedding is made of Wadmoll, which in the wearing, in their Caves, proves very hot, and breeds abundance of Lice and Vermin.

What other Commodities they want, as Salt, Iron, Linnen, *&c.* they are commonly supplied withall by the *Danes*, wherewith their Factors and the better sort, or Gentry, live splendidly.

The Dyet we have been discoursing of, though it seems unpleasing to our Constitutions, yet 'tis better than that of the *Northern Samojeds*, whom *Martinier* tells us Live in Summer-time upon Bears, Wolfs, Foxes, Crows, Eagles, and other wild Creatures, which they Hunt first, and then Eat in their Cabanes broiled upon the Coals, and subsist in the Winter upon nothing else but Fish dried in the Sun in Summer-time, unless by accident they kill some of those Bears who (having nothing left by the Snow in the Field,) come home to their Cabanes to devour them.

Horses they have to carry Fish, Flesh, Turf, *&c.* up and down, on these the Women use to ride cross Legg'd to Church, after the custom of the poor Country Women of *France*.

Hawks abound in great plenty.

Also Eagles ready to prey upon Children, whose Parents to prevent the danger, cause them to wear Bells or Collars of Bells about their Necks.

Also little Shock-Dogs there abound, which are said to be the Whelps of ordinary small Bitches, lined by Foxes that come over on the Ice.

Of

Of their Militia and Government.

THey have no other *Militia* on the *Iſland*, but only one Fort, on the cheif of the *Weſtmony-Iſlands*, on the *Weſt South-Weſt ſide* of the *Iſland*, 10 Leagues from the Merchants *Foreland*, with 12 Iron Guns in it, and there their Courts are held, and their Biſhop keeps his Reſidence.

As to what follows about their Government and Lawes we take from *Dithmar Belſkins* and *Arngreim Jonas*, which are the Authors as yet of moſt credit, and are cited by *Purchas* in his *Pilgrimage*.

The Governour yearly on the 29th. of *June* according to cuſtom, meets with the Court of Juſtice conſiſting of 12 Men appointed for the Execution of Juſtice called *Lochmaders*, who being aſſembled, each of them hath a Book in his hand containing the Laws of that *Iſland* written in the Vulgar Tongue, Accuſation and Anſwer being made, they go apart to confer of the Sentence, and pronounce it.

Thoſe that are to die for Murder or Theft are Beheaded. Their Grounds being ſcarce otherwiſe divided than by a low Ridge or Wall of Stones, Stealing of Cattle becomes a frequent Crime; The Puniſhment for the meaner ſort of Crimes, is to mark the Criminals in the forehead.

The Country is divided into Diſtricts or Diviſions called *Reppagories*, where 5 Men are choſen and empowred to act joyntly like a Bench to put Laws in Execution.

Divers Laws they have to prevent Beggary, which may be divided into three heads.

1. To prevent the reducing of any to extream and ſuddain Poverty, through their own faults, *humanitus loquendo.*

2. For raiſing Collections to relieve Loſſes ſuſtained by Fire.

3. About Almes.

Lawes

Laws of the first kind are.

1. THat one born of beggarly Parents and seeking his Maintenance from door to door, (unless Diseased) should not be capable of holding an Inheritance, till three years after he hath deserted the practice.

2. That such as have brought Poverty on themselves thorough their own faults, should be lawfully gelded, albeit with danger of their Lives, least living from doore to doore they might beget Children like their Parents, that might prove a Burthen to the Commonalty.

3. That they should have no Releif, according to that of the Apostle, 2 *Thessalonians*, c. 3 v. 10. *He that Laboureth not, let him not Eat*, neither should they be entertained in their Houses.

Laws of the second kind.

1. NOne to enter or settle in a *Reppagogie*, without leave and proof that he can sustain himself and Family without begging.

2. Losses sustained by Fire to be valued, and the *Reppagogie*, by a joynt Collection to make good half the value.

3. And if a Man loseth a quarter of his Cattle by the Murrain or Rot, half the value so lost to be raised as before, but this not to be performed above the fourth time.

Lawes about Almes.

1. SUch as are poor through Sickness, Age, or other Casualties not in their own power to prevent, are to have Alms which are either private or publick.

The private Alms related to the maintaining of the indigent by their kindred and Relations, if of Ability.

2. If

2. If that failed, they were to be maintained in common by the *Reppagogie.*

Pursuant whereto our Masters of Fishery Vessels affirm they have no Beggars in *Iceland*, that they have often seen Aged People past Labour sent on Horse back from House, to House, or rather from Cave to Cave, to be maintained there three Months more or less as the *Quorum* of *Reppagogies* appoint.

Of the Iceland and North-Sea Fishery.

OF the Cod there caught by the Inhabitants in Harbours or near the Shore, they make either Stockfish or Haberdine as is mentioned before in page 82.

Our selves and others that have only License or Priviledge to Fish off at Sea, salt it up in Heap, Mud, or Pile, as they call it, and this sort is commonly used for the Victualling of Merchant Men, and in the Reign of King *Charles* the First, was also used 3 days in the Week for Victualling the *Navy Royal*, being a sort smaller and cheaper than those caught about *Shetland* or the *North* of *Scotland.*

The price then allowed the Victualler for a siz'd Cod, to wit one of 24 Inches long, which served eight Men a Day for whole Allowance, being seven pence, (in a Proportion of Harbour Victuals) and eight pence three farthings in the Channel, or Victuals to be spent to the *Northward* of the *Canaries*, or *North Latitude* of 27°, and Nine pence half penny in Victuals to be spent to the *Southward* of that *Latitude*, and this was a dear rate in Comparison of what they may be had at now.

The manner of Catching is thus,

A Fisherman hath a Line of 90 fathom length or more, with a Lead at the end of it called a deep Sea-Lead, of about 6 or 7 pound weight to sink it, above which is a cross-Stick called a chop-Stick, with two Lines and hooks at them with baites.

The

The Cod are a ravenous ſort of Fiſh, purſuing Herrings or any ſmall Fiſh for their Prey, are baited at certain ſeaſons on deep Banks; at other ſeaſons retire with Herrings as 'tis b leived to the greateſt profundity of the Ocean near them.

They will bite at any Bait either Fleſh or Fiſh, and the reſt ſeeing one hath ſpe1 will follow: part.cu!arly this Summer one Mr. *Robert Payne*, Maſter of one of the Companys Doggers, informes, that (finding no Swimmers) he baited and caught one Cod in 90 fathom Water, and with him making more Baites, he at laſt inticed the Shole by degrees from 90 to 40, 20 and 10 fathom Water, where the Fiſh were plainly ſeen, and were ſo greedy that they took 1600 in a day, and might have done more, if they could have dreſſed and cured them, the manner whereof here and elſewhere is;

The Cod being haled on Board, they are laid upon the Decks in the Veſſel, (or may be on boards or Tables;) One Man chops or wrings off the Head throwing it over Board, and enters a Knife at the Navel, and cuts it up to the Throat and downwards, taking out the Guts, Garbidge, and Rows, to throw away; as alſo the Livers to reſerve in barrels to make Oyle of.

Another, the Splitter, takess out the back-bone, and lays the Fiſh open to the Tail.

Then they ſalt them, and lay them Nape and Tail in a Bed on the Deck, as faſt as they can diſpatch.

The manner of ſalting is, a Man hath a ſmall ſalting Platter that may hold about a quart, which he diſperſeth cheifly on the middle or thickeſt part of the Fiſh, from whence it runs off on the Tail and thinneſt part.

And when one lay is done, they pile them up in their Holds, and proceed to another, making in the middle of the Hold, the courſe of Fiſh higher by two foot than on the ſides, that the Pickle deſcending may fall on the ſides.

Of Oyle made of Cods Livers.

THe Livers being barrell'd up, three barrels of their owa nature without any Artifice, yield one barrel of foul Oyle, the which is thus got, let the barrel, ſtand 48 hours

on their Heads and the Oyle will ſwim at top, from whence it may be keeched with a pot, ſo long as the Oyle may be taken off without Blood, which they put into an empty barrel, let it ſtand ſix hours and then ſcum it off, and there will be left about half or more in Blood and Guts.

The Remainders or Reſidue are called blubber-Livers, when brought home, or to a convenience for Boyling are Boyled up, and 7 or 8 barrels of Livers may yield one barrel of Oyle.

Here we may intimate, that the Fiſh it ſelf ſeparated from the Bones and cut into peices is called Blubber, and all great Fiſh or Sea Monſters afford Blubber for making of Oyle.

Eight barrels are reckoned to a Ton, formerly ſold for 30*l.* but now not at above half the Value; this Oyle is uſed for Lamps, as alſo by Curriers, and Ship Carpenters, *&c.* And for this Information I am beholding to Mr. *Joſeph Fiſher*, a Maſter of one of the Doggers belonging to the Royal Fiſhery Company.

Green Fiſh or Cod unbarrelled.

THeſe are alſo caught in *Northſea* Veſſels, which ſet out about *April* or *May*, and Fiſh about the *North* of *Scotland*, or more *Northwardly*, till the end of *Auguſt*.

1. When they are caught, they ſplit, and uſed to ſalt them with Bay Salt, and lay them in Heaps or Piles one above another, with Lanes of Salt between each, and ſo fill up till they have a Lading, if they can.

2. They bring them to a home Market, and ſell them to the Fiſhmongers, who Salt them with freſh Salt, that hath not been formerly uſed, to keep them cool and from Wind and Air, as is pretended probably in excuſe of the uſe of bad Salt.

As to their Quality, Many of them ſtink, for 'tis a certain Maxim, that if Fiſh or Fleſh be not well cured and ſalted at firſt, they cannot be recovered, and ſuch as do not Stink, are not very acceptable at home or abroad, by reaſon of their Dirt and yellowneſs which the Bittern contributes to, as alſo mortifies and corrodes their ſubſtance, and that more ſpeedily in a hot than a cold Climate.

And Salt-Fish thus ordered, 'tis granted will not keep above six Weeks in a hot Climate; Yea many Vessels or Ladings of it have frequently and lately miscarried at Home, as may be easily proved by the attestation of the Fishmongers.

Much both of this and *Iceland* Cod, that is brought home in *April* and *August*, hath the Salt washed out, and being dried in the *Sun* and the Wind, is called Haberdine, after the manner of making Poor-Jack at *Newfoundland*, of which more hereafter.

Green-Fish, (*alias* Staple Fish as they call it,) cured with a good Salt proves excellent, and the Fishmongers alledge, it exceeds barrel'd Cod in goodness and cheapness.

But as to this Assertion, I cannot tell how to agree, unless restrained to the Summer-time, at which time indeed if Cod be but once salted and stapled, the Pickle and moisture run away; whereas if but once salted and barrel'd up, its possible the heat may cause the moisture to impair the Fish, but in Winter-time, Cod slightly salted, and after a few days repacked with fresh Salt, hath proved most desirable, white and firm, the *Dutch* both in Summer and Winter barrel up all they salt.

This Summer, the Royal Fishery Company brought in 80*C.* large Fish in one Vessel, which were sold at 20*l.* the Thousand, that is not above a Groat a piece, the which were ordered to be cured with *Spanish* Salt; the Company being induced to use it for these Reasons.

1. It was said to be cheaper than *Portsea* Salt.
2. A less quantity of it, would cure more Fish than *Portsea* would do.
3. There was little *Portsea* Salt then to be had.
4. It would make the Fish too good for Ship Expence.

To which I can now Reply,

1. That *Spanish* is dearer than *Portsea* Salt.
2. That *Portsea* Salt hath not been tried on Staple or Green-Fish, but in Herrings we find a less quantity of *Portsea* Salt to go further, with better effect than any other Salt, insomuch that the Companies Herrings have yielded two shillings a barrel more for being cured with this Salt, than other Herrings cured with other Salt, as Mr. *Watson* Husband to the Company can well prove.
3. That now this and *Lemmington* Salt will become common, and at a moderate rate.

A

A Narrative how Salmon is Cured at Berwick, *imparted by Mr.* Benjamin Watſon, *Merchant.*

1. THey are commonly caught from *Lady-day*, to *Michaelmas*, either in the River of *Tweed*, or within three Miles or leſs off at Sea againſt *Berwick*.

2. Thoſe caught in the upper part of the River, are forthwith brought on Horſeback, and thoſe at the lower part thereof in Boats, to *Berwick*, freſh.

3. Then they are laid in a pav'd Yard, where for curing there are ready, 2 Splitters, and 4 Waſhers.

4. The Splitters immediately ſplit them, beginning at the Tail, and ſo continue to the Head, cloſe by the back Fin, leaving the Chine of Salmon on the under ſide; taking the Guts clear out, and the Gils out of the Head, without defacing the leaſt Fin: And alſo take out a ſmall Bone from the under ſide, whereby they get to the Blood to waſh it away.

5. Afterwards the Fiſh is put into a great Tub, and waſhed outſide and inſide, and ſcraped with a Muſcle-ſhell, or a thin Iron like it; and from thence put into another Tub of clean Water, where they are waſhed and ſcraped again, and from thence taken out, and laid upon Wooden Forms, there to lie and dreyn 4 hours.

6. Thence they are carried into the Cellars, where they are open'd, or laid into a great Fat or Pipe, with the Skin-ſide downward, and covered all over with *French* Salt, and the like upon another lay, and ſo up to the Top, and are there to remain ſix Weeks: In which time 'tis found by experience, they will be ſufficiently ſalted.

7. Then a dried Calve skin is to be laid on at the top of the Cask, with Stones upon it to keep them down; upon the removal whereof, after 40 days or thereabouts, there will appear a Scum at the top about two inches deep, to be ſcum'd off or taken away.

8. Then the Fish is to be taken out and washed in the Pickle, which being done, they are to be carefully laid into barrels, and betwixt every lay, so much Salt sprinkled of the remaining melted Salt in the Fats, as will keep them from sticking together. And after the barrel is one quarter full, to be stamped or leaped upon by a Youth of about 15 years old or thereabouts, being covered with a Calves-skin, the like at half full, and also when quite full.

9. Then a little Salt is to be laid at the top, and so to be headed up; and then the Cask is to be hooped by the Cooper, and blown till it be tite.

10. Then a bunghole to be made in the middle of the Barrel, about which is to be put a Ruff or Roll of Clay, to serve as a Tonnel, whereby frequently to fill the Barrel with the Pickle that is left in the Fat, which will cause the Oyle to swim; which ought to be frequently scum'd off, and serves for greasing of Wool. And thus after 10 or 12 days to be bounged up as sufficiently cured, and fit for Exportation.

Observations on the former Method.

5. ARticle. A Brush is fitter for the outside, and a Spunge for the inside.

6. Article. They may be salted but once, as Cod is salted, or they may be Piled as Pilchards, and the Oyle that way may be saved.

10. Article. 'Tis convenient to supply them with a Pickle, and we reckon the Fish is best cured in its Oyle; If not, it will rise and may be scum'd off though but once salted.

Salmon failing, or much decreasing this year at *Berwick*, 'tis not amiss to intimate where there is Plenty, to wit, the River *Dovy*, or *Aberdowy*, in *Merioneth-shire*, and several other Rivers saith Capt. *Lloyd*, (an eminent *Welch* Gent. in a Paper imparted to *Parliament* Men, and the Fishmongers,) afford vast quantities of Salmons, himself having taken (big and little) in three hours time above six Score, which he averrs to encourage the undertaking of a Salmon Fishery there, *&c.*

OF THE

NEWFOUND-LAND FISHERY.

Of Poor-Jack.

THat ſort of Cod that is caught near the Shore, and on the Coaſt of *Newfoundland* and dryed, is cal'ed *Poor-Jack*.

Our Veſſels ſet out from *Dartmouth*, *Plymouth*, and many other places about the beginning of *March*, and continue Fiſhing all the Summer, and give over about *Michaelmas*.

The manner of catching is the ſame as of *Iceland*, and other Cod ſave that here, it is performed in Boats near the Coaſt. In a Treatiſe called the *Golden-Fleece*, we read, that three Men at Sea in a Boat, with ſome Men on Shore to dreſs and dry the Fiſh, will in 30 days kill betwixt 25 or 30 thouſand, which with the Train-Oyle are worth about 120 *l.*

When the Shallops or Fiſhing Boats are full, they carry the Fiſh on Shore, to ſuch place where there is a Stage or open Scaffold to the Sea, where they place the Fiſh like ſheafes of Corn, where being prepared and ſalted for 24 hours time, and having the ſame waſhed out with Sea-water, they are carried forth and expoſed upon the Rocks, or the Sand to the Wind and the Sun to dry; for performing whereof a temperate Windy ſeaſon is beſt, they turn them in ſix hours which they often repeat, and in the Night lay the Skin-ſide uppermoſt to avoid Moiſture, then they Pyle them up, and a Week after expoſe them to the Air again, and after ſix days preſs them divers times, and then being dry, are laid up in Heaps or Piles in the holds of Ships, as well cured, and fit for Market, either for preſent expence, or for long Voyages, and is much uſed by the *French* and *Spaniard* for that purpoſe.

In

In *Purchas's Pilgrims*, page 1886, we find, that in the year 1622, in the Narrative of Capt. *Richard Whitburnes* Voyage, that the Fiſhery there was then very conſiderable.

The Bank is a Sandy Ground, 12 Leagues broad, and in length tending *North-Eaſt*, and *South-Weſt* above 110 Leagues, 20 fathom deep on the ſhalloweſt part, abounds with Fiſh all the year, by curing rendred Green-Fiſh, worth 5 *l.* or 6 *l.* the hundred.

He ſaith that the *French*, *Biſcayers* and *Portugals*, fetch from the Coaſt and the Bank, which lieth within 25 Leagues of the South Cape of that Country, and from the Coaſt of *Canada* which lieth near unto it, above 400 Saile of Ships Ladings yearly.

That the *French* uſe to Fiſh both Winter and Summer, making two Voyages every year thither, curing Green-Fiſh on the Bank, and Poor John on the Shore.

That the *Engliſh* in the year 1615, had about 250 Saile great and ſmall, the Burthen and Tonnage of the whole, he computes at 60 Ton each Veſſel one with another, to be 15000 Tons, and allowing 20 Men and Boys to each Veſſel one with another, there were no leſs than 5000 Perſons employed.

Each Veſſel held one with another, by a rationol Eſtimate 120 thouſand Fiſh, and 3 Ton of Train Oyle, and all theſe Sold after the rate of four pounds the thouſand, amounted in Money to one hundred and twenty thouſand pounds; this is not a penny a Fiſh, and if it yielded leſs it was ill Sold.

To which muſt be added the Train Oyle being 1250 Tons, which at a cheap rate of 12 *l. per* Ton, makes 15000 *l.* more, to which may be added the Overrate and profit in Foreign Countries; and it is a conſiderable Gain obtained by the ſole Labour, and Induſtry of Men, without Exchange or Exportation of our Coin and Native Commodities, or other adventure than of neceſſary Proviſions for the Fiſhing, as Salt, Nets, Leads, Hooks, Lines and the like; and of Victuals, as Bread, Butter, Beere, Beef, Pork, Cheeſe, Peaſe, *&c.* By which means many Tradeſmen are Employed, as Bakers, Brewers, Ship-Carpenters, Coopers, Smiths, Rope-makers, Line-makers, Hook makers, Pully-makers, *&c.*

The

The Merchants in their Petition and Remonſtrance in 1659, ſet out the State of this Fiſhery as followeth,

We had many hundreds of Engliſh *Ships, and many thouſands of Seamen, that had their conſtant yearly employment for* Newfoundland, *and being Laden with Fiſh, the moſt of them Sailed from thence for ſeveral Ports of* Spain, *and its Territories; as from* 50 *to* 60 *Ships for* Bilboa *and St.* Sebaſtian, 40 *to* Cadiz *and* St. Lucar, 20 *for* Malaga *and* Velez, *from* 20 *to* 30 *for* Alicant, Valencia, *and* Cartagena: *Beſides others that went to the* Groyn *and other Port Towns in* Spain; *the moſt of the remainder went for* Maiorca, *and* Minorca, Sicilia, Sardinia, Naples, *and ſpent in the Dukedom of* Milan, *and in Victualing of their* Gallioons, *Gallies,* &c. *Hereby, (well conſidered,) we had great advantages, for thus clearly there was added to the Stock of the Nation, at leaſt five hundred thouſand pounds per Annum, and ſo much got out of the Sea, by the Labour and Induſtry of our People, and the Shipping maintained. And it was alſo a Nurſery for Seamen, breeding more than all other Trades whatſoever; they carry not out ſo much Beef and Bread as they would have Eaten in* England; *the moſt of their Food being Fiſh. And if they had not been thus Employed, perchance they might have lived idly at Home, and ſo, have been unprofitable Members of the Common Wealth, and to have had their Subſiſtances from other Induſtrious Perſons.*

Whilſt we have aſſiſted the French, *they have in a manner got this whole Trade; this year they had above* 250 *Ships at* Newfoundland, *and have obtained free permiſſion from the King of* Spain, *to enter into the Ports of* Bilboa, St. Sebaſtians, *and* Paſaque, *with their Fiſh and Men, where they do not only furniſh the Men of War that take us, but the Fiſh is carried from three to four hundred Miles up in the Countries of* Spain.

St. John de Luz, *had not formerly above* 8 *Sail of Ships, and this year they have had near fifty Sail, a good part of which were* Engliſh *Prizes, and without doubt incouvently the* Spaniards *have a great intereſt in them, and it will be a hard matter now to get this Trade again from the* French.

Thus they, and the *French* are ſaid to be more numerous and Induſtrious in that Trade than heretofore, whereas the *Engliſh* much decline, the cauſes whereof are;

A Governour was setled there in 1638, by King *Charles* the first, with a Power of leavying Impositions for liberty to Fish in our Harbours, namely the *French* paid 5 *per Centum*, which made them to retire to the Southside of the end of the *Island*, where they built two Forts, and Fish from *Cape Race*, Westwards; and in the year 1670, took in two Bays more to wit, *Placentia* and *Passara*, and have above five times increased their Fishery, Ships, and Vessels, since they had a Governour, and they Fish four Months in the year more than we, and thereby make double Voyages. Our Planters observing this, took the opportunity in the absence of our Fishery Vessels, to Burn and destroy Woods, and the Stages and Houses we left standing, and remove and carry away the Boats, Rayles, Cask, Salt, Nets, and Pans for Boyling of Oyle, which we left there, to remote Places, where we cannot, or do not usually Fish, to the end that by selling the same to our own Interlopers, that come sooner, or stay longer than the Fleet, to the *French*, and to the *New-Englanders* for Provisions, and by destroying the young Fry, they might Fish as long as the *French* when we are gone, to the end they might furnish them, *&c* before we come. To which corrupt Practises we add some of our own, Namely, that those that come first destroy the Stages (if remaining,) of those that arrive afterwards, to the end they may get a Voyage before them, and many of our Vessels cast their Ballast in the Harbours; which corrupt Practises being complained of in Parliament, an Act was obtained, for Regulating the Fishery, *viz.* 16° *Car.* 2. *Chap.* 16. where we read it Enacted.

That no person whatsoever, do Collect, Leavy, or take, or cause to be Collected, Leavyed, or taken in Newfoundland, any Toll, or other Duty of, or for any Cod, or Poor-John, or other Fish of English Catching, under pain of the loss of double the value of what shall be by them Leavyed, Collected or taken, or caused to be Collected, Leavyed, or Taken. And that no Planter or other Person, or Persons whatsoever, do lay any Heynes or Nets, in or near any Harbour in Newfoundland, whereby to take the Spawn or young Fry, of the Poor-John, or for any other use or uses except for the taking of Bait only, upon pain of the loss of all such Heynes or Nets,

and

and of the Fish taken in them, or of the value thereof, to be recovered in any of his Majesties Courts in Newfoundland, or in any Court of Record in England or Wales, by Bill, Plaint, or other Action, wherein no Essoign, Protection, or Wager in Law shall be allowed.

And it is hereby further Enacted by the Authority aforesaid, that no Planter, or other Person or Persons whatsoever, shall Burn, Destroy, or Steal any Boat, Cask, Salt, Nets, or other Utensils for Fishing, or making of Dyle, or other Goods or Merchandize left in any Harbour, in Newfoundland or Greenland, by English; or Burn, Pull down, or Destroy, any House Built by English in Newfoundland or Greenland, to Live in during the Fishery Season; or Stage Built by them in either of the said Places, for the Saving or Drying of Fish or making of Dyle, upon pain of the loss of double the value of what shall be by them Stolen, Burnt, or Destroyed, to be recovered in any of his Majesties Courts in Newfoundland, or Greenland respectively, or in any Court of Record in England; by Bill, Plaint, or other Action, wherein no Essoign, Protection, or Wager in Law shall be allowed.

After this, our *Western* Fishery Adventurers met with little or no redress of these Inconveniences, but rather fresh Discouragements, namely in 1665, the *Dutch* War being broke out, our *Newfoundland* Fishery notwithstanding proceeded, but out of our Ships about 1000 Men staid on Shore, to avoid being Prest to Sea in case they had returned, and these joyning with the Planters in their mischievous practises, caused so much dammage to ensue, that the Town of *Dartmouth* humbly represented to his Majesty by Petition about the year 1670, (as I remember being then a Clerk in his Majesties Council of Plantations,) that themselves in one year had lost eight thousand pounds, and that in three former years, the Adventurers in general had lost after the rate of 6 *per Centum per Annum*.

And for Redress, craved the assistance of some Men of War as a Guard, with power to discover, encounter, and bring away our Men on Shore, which was granted, but returned (as I am informed) *re infecta*, having brought away very few.

They further craved of his Majesty the building of Castles, and setling of Garrisons and Plantations there in some eminent Ports, for which they alleadged reasons to the following purport.

1. That if we did it not, we might be prevented of the opportunity in the best Harbours by others, who hold such deligns Honourable, Lawful, Profitable, Easie, and Necessary.

2. That *Newfoundland* is an *Island* bordering on *America*, and lies in Latitude from 46 to 52°, and is nearer to us than any other Plantation, being but about 700 Leagues, or 10 or 12 days Sail from *Ireland*, and bigger than it.

That it was first discovered by *Sebastian Cabot*, at the charges of *Henry* the *7th.* King of *England*, in the year 1496, and Sir *Humphrey Gilbert* took Possession thereof in the year 1583, in the name and to the use of *Queen Elizabeth*; that it hath divers *English* Plantations setled in it in the Reign of King *James*, and *Charles* the first.

3. That it is in a healthful temperate Climate, much hotter than *England* in Summer, to wit, from *June* to *Michaelmas*, and no colder than the *North* of *England* or *Hamborough* in Winter; and by reason of its Verdure, cannot but be proper for Corn, Hemp, Flax, Rootes, Pulse, and Herbs of many kinds, of which kind some have seen fairer Crops for the quantity, than any growing in *England*, the Spring beginning there at the end of *April*, and the Winter at the end of *December*.

4. That the *Northern* parts of it are Hilly and Woody, but the *Southern* are a plain Champaign Soyle, and yields many considerable Growths and Commodities, *viz.* Trees,

As Pine, Birch, Spruce, Firr for Deal-Boards, Masts, Cypress-Trees, Oaks, Cedars, Hawthorns, Alder, Willow, Bark for Tanning and Dying of Nets, Charcoal for Iron.

And out of these Woods may be had, Pitch, Tar, Rosin, Turpentine, Frankincense. Soap-Ashes, Honey out of hollow-Trees.

FRUITS

FRUITS.

As Vines, Goosberries, Rasberries, Mulberries, Filbeards, Strawberries, Hartles, Cherries, Wild-Peaſe: *English* Seeds have proſpered there exceedingly, as Beans, Peaſe above a Mans height, Raddiſh, Cabbage, Turneps, Carrots.

WILD BEASTS.

As Beavers, Sables, Black Foxes, Hares, Martenes, Musk-Rats, Seales, Otters, which yield Furs; Deer called Ellans as big as Oxen.

FISH.

Mackarels, Salmons, Peales, Herrings, Eeles, which may be ſalted and barreld for Exportation; Halybuts, Flookes, Pearles in them, Lobſters, Crabs, Muſcles, Oyſters, Muſcles with Flounders, Launce, Caplin, Trouts, and many Sea-Monſters, and much more beſides in many Springs, Rivers and Lakes.

FOWLE.

Partridges, Penguins, Pheaſants, Thruſhes, Black-Birds, Canary-Birds, Geeſe, Ducks, Pidgeons, Gulls, Godwits, Curlews, Swans.

CATTLE.

Many ſorts, as Wild-Hogs, Goats, &c.

To which inducements were added the neceſſity of ſuch Plantations, for employing abundance of Poor, and breeding up of Fiſhermen; the third of the Men that go a Fiſhing being Green-Men, that never were at Sea before; and the cheapneſs of their being tranſported in comparison of other Plantations.

And the great advantage by their being there, to Build and repair Warehouſes and Stages, in readineſs againſt the Arrival of our Ships, who ſpend 20 days in Building of Stages.

And Laſtly, The conſiderable Livelyhood they would get, in catching and curing of Fiſh in readineſs againſt our Ships Arrive, whereby we might make two Voyages in a Summer.

Notwithſtanding all which inducements, the Sea-Ports are neither ſtrengthened nor Inhabited, the reaſon whereof may be, in regard the Coaſts are extream cold, when the *Iſlands* of Ice paſs along the Shore; which Ice there found in the Spring of the year, comes from the *North*, and is there diſſolved in a ſhort time. One Capt. *Edward Wynne*, Governour of Mr. Secretarie *Calverts* Plantation, in a Letter dated the 17*th.* of *Auguſt* 1622, aſſerts notwithſtanding, that it was not ſo cold there the laſt Winter, as it was in *England* the year before, that he remembred but three ſeveral days of hard Weather, and thoſe not extream neither, he having known greater Froſts, and far greater Snows in *England*.

Our ſcattering Plantations there are in the South part, where live none of the *Savages*.

The chief Harbours are *Trinity* Harbour, which is ſaid to be the beſt in Chriſtendom except *Milford* in *Wales*, ſeated in the entrance of a *Bay* of the ſame Name, on the Northſide of which are divers other Harbours, and one noted River in the Body of the Land which lies *Northweſt*, where may be had a good Trade with the Natives for Furs.

About 20 Leagues to the *Southward*, is another excellent Harbour called St. *Jones*.

And 15 Leagues to the *Southward* of it, is the Harbour of *Ferriland*, and theſe, with *Formoſa* and *Renowſe*, are the chiefeſt that our Nation frequents in Fiſhing time, though there be about 20 good Harbours more, but the main of our Fiſhery lies from *Cape Bona Viſta*, *Northwards*.

But the three firſt are moſt fit and capable of being Planted and fortified, for *Ferriland* lies within 3 Leagues of the furtheſt *Southward* Harbour; we frequent *Trinity* Harbour within 10 or 12 Leagues of the moſt *Northward*, and St. *Jone's* to near *Midway*.

The

The Council of Plantations considering what a great charge it would be to his Majesty to build Castles, maintain Garrisons and a Governour there, and that three former Addresses to his Majesty to the same purpose had been rejected, refused to make any Report to that purpose, and perchance the same scruples yet remain.

Of Anchovas.

THese are commonly Imported from *Genoa* (in *Italy*) in Barrels that hold about 3 Gallons, weighing about 36 pound, which are commonly Sold at 10 or 12 pence the pound, and such are there salted with *Spanish* Salt, into which they put a Pickle made of Salt, Red-Wine, or the Lees thereof, with powder of Saunders. Mr. *Alcorne* (oft before mentioned) saith, that many barrels of them are yearly lost, by reason of the Corrosive nature of the Salt; that he hath bought divers barrels of them, and to prevent such loss, hath taken them out of their old Salt and Pickle, and repacked them with his own *Portsea* Salt and Pickle, by which means they have been preserved two years longer, than otherwise they could have been.

And now we have good News to tell the Reader, namely, that they abound on the Western Coasts of *Wales* and *England*, for proof we offer the following Reasons.

1. I am informed, that the Learned Doctor *Pope*, Astronomy Lecturer of *Gresham-Colledge*, and a Member of the *Royal Society*, affirms, that he had long since eat of them at *Westchester*, and concluded them to be of the same kind he had met with in *Italy*.

2. M. *Henry Wynn*, Mathematical Instrument-maker in *Chancery-Lane*, who hath some concerns in *Wales*, went thither last year, where he eat many of them, and found they did dissolve as *Italian* Anchovies, and proved as good, and many barrels of them were Salted, Pickled, barreld up, and Sold about the Country as such, and were esteemed very good; although there they are called by the name of Shads.

The

The ſaid Mr. *Wynn* affirmed, that Doctor *Lloyd*, the late Biſhop of *Bangor*, had cauſed many to be caught in a little Arm of the Sea in his Biſhoprick, in Summer time, when they are in ſeaſon and arrive, which were ſalted up; and recommended me to his Lordſhip to be informed of the truth thereof, who courteouſly received me and affirmed, he had brought up ſome Gally-Pots of them to *London*, and that here as his Servants well knew, they were concluded to be right Anchovies; that he had none left, but promiſed to ſend me up a Gally-Pot of them, but Death prevented.

4. One Capt. *Lloyd*, a *Welch* Gent. that Printed a Paper of the Fiſhery of *Wales*, affirms, that Shads are ſo common there, that he hath ordinarily caught three or four hundred of them at a Draught, after what manner he ſaith not.

5. Mr. *Euſtace Burnaby*, gave me a few Anchovies out of a Gally-Pot, that he ſaid were caught on our own Coaſts and *Engliſh* cured; which I carried to ſome Fiſhmongers, who approved them to be right Anchovies, that did diſſolve for Sawce, though in truth they were ſomewhat larger and not ſo red as Foreign.

Now having done our remote Summer Fiſhing, we draw near home to an Autumn and Winter-Fiſhery.

Of Pilchards.

The ſole Fiſhery thereof in England, *is on the Coaſts of* Cornwall *and* Devon, *the manner of Catching and Curing, with the Inconveniences and Remedies thereof, ſo well as Mr.* Alcorne (*without any or but ſmall experience*) *on ſuddain Notes taken from him, are as followeth.*

1. THey go a Fiſhing near the Shore on the Coaſts of *Devon* and *Cornwall*, in the Months of *Auguſt, September, October.*

2. Director on Shore, by the Colour of the Water eſpid where the Shoales are, and make ſigns to the Boats to get into the middle of them.

And

And this they are empowred to do in any Mans Ground, by the Statute 1 *Jac.* 23. which runs thus: *In the Counties of Somerset, Devon, and Cornwall, it shall be lawful for Buyers of Fish to go upon any Mans Ground, near the Sea Coast, to Discover Fish, and for Fishermen to dry their Seames and Nets, without danger of committing Trespass.*

3. The Boats as soon as Laden bring them to a Warehouse on Shore, where they are laid up in Piles, as broad as a large Table, supported with backs or sides.

4. In the Piling of them up, they are salted with Bay-Salt, in which they lie soaking 20 or 30 days together, in which time there runs away much Blood, dirty Pickle and Bittern, which Bittern draws forth much of the Oyle from the Fish, before it comes to the Press, to the great loss of the Undertakers.

5. When they are taken out of Pile, there remains much Salt at the bottom of the Pile, intermingled with much Dirt, Blood and Scales.

To prevent the loss thereof, if they have opportunity, they make another Pile, and use the same with more fresh Salt, if not, it may be presumed they must be content with the Loss, for the Salt is continually wasting, and at last little left but the Dirt and Sand the Salt afforded, and Scales of Fish.

6. Then they wash them in Sea-water, to wash off the Dirt and the Blood.

7. When they are dreyned, they are put into barrels and Pressed, to drive out their Oyle, which issues away at a hole in the bottom of the Cask, and are then accounted fit for Exportation, to *Spain* or other *Southwardly* Countries.

The Inconveniences of this Method are,

1. THe badness of the Salt, it being incumbred with much Dirt, Sand and Bittern, carries away the Oyle, Goodness and Moisture of the Fish, which is absolutely lost.

2. By reason the Salt is not of a proper size, it doth not dissolve in due time; hence twice as much as need be, is used, and much time and pains lost.

These Inconveniences may be prevented by the uſe of Engliſh *refined Salt, made from Brine raiſed by the Sun, and Embodyed by Fire, thus,*

1. IN half the time of *Article* the 4*th.* abovelaid, the Brine and Oyle, or Pickle that runs away, having no Dirt in it, may be received in a Well or Receptacle, at the end of the Pile, and what Oyle ſwims may be ſcumm'd or taken away, and put into a ſeparate Cask.

2. The remaining Brine having no Dirt or Bittern in it, is of it ſelf a good preſervative for Fiſh, and may be thrown on the ſame three or four times over, to haſten the diſſolving of the Salt, by which means there will be much time and Salt ſaved.

3. When it becomes Bloody and Scaly, it may be Boyled and ſcumm'd, and ſo refitted for further uſe.

4. When the Fiſh are waſhed and dreyned, they are fit to be Preſſed as before, and will not have that fiery taſt which the Bittern occaſions in the former method, and the waſhing, in regard the Fiſh are not Dirty, need not be performed in the Sea but in a Storehouſe, where one Hogſhead of Water or Sea Liquor will waſh many Laſts, and may by often uſe, be made ſo ſtrong by the Salt hanging on the Fiſh, that being laved on the Pile, will not only ſupply the uſe of Salt, but haſten the curing of the Fiſh, by melting the Salt in which they lay ſoaking.

Other Benefits ariſing from the uſe of Refined Salt.

1. THoſe that are caught at the firſt arrival, may be ſalted as white Herrings, and kept a year more or leſs, and will be more acceptable than ſuch Herrings, by reaſon they are more fat and Oyly; furthermore they may be uſed for Sawce like Anchovies: Namely, to be minced, beaten, and diſſolved in the Sawce, with a digeſtive gentle or ſimmering heat.

This

This ſort are commonly called *Fumathos*, and ſo they are denominated in an Act of *Parliament*, 14. *Car.* 2. *Cap.* 28. out of a barrel of this kind which had its Pickle, I had ſome given me, which were dreſſed at a Tavern raw like Anchovies, and eat very like them to the great content of the Partakers; whereas a barrel of them ſent to a Merchant that had loſt their Pickle, proved ruſty and naught.

2. They may be cured with a Pickle, and barreld up like White-Herrings; For the reaſon why in the common Method they preſs out the Oyle, is becauſe they know not how to cure them in the Pickle, which may be done by Repacking them with dry refined Salt, and the Cask afterwards fed with good Pickle at 6 or 8 hours diſtance.

3. After the firſt or a little ſalting, they may be Deeſed and rendred like Red Herrings.

4. In this Method not ſo much Oyle is drawn out of the Fiſh, and yet more may be ſaved than in the former Method.

5. Refined Salt is not of a fiery, dry, burning, corroding, mortifying Quality, rendring an ill taſt, but quickly pincheth and peirceth and keeps the Fiſh cool and moiſt in a hot Climate, whereby fermentation is prevented.

Of Herrings.

In Mr. Simon Smiths *Book Intituled the Herring Buſs-Trade, they are thus diſtinguiſhed.*

1. *Sea-Sticks* are ſuch as are caught all the Fiſhing ſeaſon, and are but once packt; A barrel will hold 6 or 8 hundred, as they ſhall riſe in bigneſs, 8 barrels to the Ton by the Law: A hundred of Herrings is to be 120, and a Laſt ten thouſand, we commonly reckon 14 barrels to the Laſt.

2. There are repackt on Shore, and are called Repackt-Herrings, 17 barrels of *Sea-Sticks* will make from 12 to 14 barrels of Repackt ones. The manner of Repacking is, to take the Herrings out of their Pickle, waſhing them in their own

Pickle, and ſo lay them orderly in a freſh barrel, which have no Salt put to them, but are cloſe packt, and headed up by a Sworn Cooper, with Pickle when the barrel is half full, that is to ſay, with Brine ſo ſtrong as a Herring will ſwim in it.

3. *Summers* are ſuch as the *Dutch* Chaſers or Divers catch, from *June* to the 15*th.* of *July*; theſe are Sold away in *Sea-Sticks* to be ſpent preſently, in regard of their fatneſs, and will not indure Repacking, and ſo go one with another full and ſhotten; but the Repackt Herrings are ſorted, the full Herrings by themſelves.

4. *The ſhotten and ſick Herrings* are put into barrels by themſelves, marking the barrel diſtinctly.

5. *Crux Herrings* are ſuch as are caught after the 14*th* of *September*. Theſe Herrings are cured with Salt upon Salt, and are carefully ſorted out, (all full Herring,) and uſed in the Repacking as before mentioned.

6. *Corved-Herrings* ſerve to make Red-Herrings, and are ſuch as are taken in the *Yarmouth* Seas, from the end of *Auguſt*, till the middle of *October*; provided they can be carried on Shore within a Week leſs or more after they be taken.

Theſe are never gipped, but rowed in Salt for better preſervation of them, till they can be brought on Shore; and ſuch as are preſerved to make Red-Herrings, are waſhed in great Fats in freſh-water, before they are hanged up in the Herring-Hangs, or Red-Herring Houſes.

The manner of Salting.

1. THe Nets are haled on Board, and the Herrings are taken out of them, and put into the *Warbacks*, which ſtand on the ſide of the Veſſel and reſemble Cheſts.

2. When all the Nets have the Herrings taken out of them, one fills the Gippers Baskets.

3. The Gippers cut their Throats, take out the Guts, and fling the full Herrings into one Basket, and the ſhotten into another.

One

4. One Man takes the full Basket, when they are Gipt, and carries them to the Rowerback wherein is Salt.

5. One Boy doth Row, and ſtir them up and down in the Salt.

6. One Boy takes the Row'd Herrings, and carries them in Baskets to the Packers.

7. Four Men Pack the Herrings into the Barrel, and lay them one by one ſtreight and even.

8. One Man when the barrel is ful, takes the ſame from the Packer, and it ſtands one day or rather more open to ſettle, and that the Salt may melt and diſſolve to Pickle, and then fils them up, and heads up the Barrels.

The Pickle muſt be ſo ſtrong that a Herring may ſwim in it, and then it doth ſo pine, and overcome the nature of the Herring, that it makes it ſtiff, and preſerves it; otherwiſe if the Pickle be weaker than the nature of the Herring, it will overcome the ſtrength of the Pickle, and ſo the Herring will decay.

One barrel of Salt will cure three barrels of Herrings, and it is common to allow 2 barrel of Salt in a Laſt, of 14 barrels to War withall, that is to rowle the Herrings in the Salt before they are Packt.

To the *Dutch* Laws before mentioned, we may add another made this year, *viz.* That no Herrings ſhall be caught after the 20*th.* of *November*, being their St. *Andrews* day.

The great plenty of Herrings round the Coaſt of *Ireland* is notorious, one inſtance whereof we have mentioned in *Dublin-Bay* Page 67; that there is the like plenty on the Coaſts of North and South *Wales*, is aſſerted by Capt. *Lloyd* before mentioned in page 102, becauſe thoſe pidling Boats which the poor and ignorant Fiſhermen now uſe, being but of four Tons Burthen, open, and no ways capable to bear the leaſt Storm, yet take ſometimes 60 Meſh at a Tide, which are three Laſts of Herrings, and if their Boats would contain one hundred Laſts, they might fill them. Upon theſe Coaſts there are from 60 to 80 of theſe Boats, and though they catch a great quantity of Herrings, yet ignorance, want of Method and Money, keep them in great Poverty. Moreover he ſaith 'tis certain that 3 or 4 Buſſes or Doggers ſhall catch more Fiſh than all thoſe Boats do now; yea and that the Under-

takers ſhall reap a greater advantage, by the Herrings caught by theſe Boats, than the Fiſhermen ſhall that catch the ſame.

To promote the Expence of Pickle-Herrings, we recount the ways they are dreſt.

1. THe *Dutch* cut off the Head, Taile, the bottom of the Belly, take the Rows out, and the Skins off, and then cut them into peices, and commonly eat them with Oyle.

But here we mince them ſmall, and beſides the Oyle, put in minced Onions, Lemmon, Apples.

At the Houſe of *Signior Dominico* an *Italian*, at the Sugar-Loaf againſt the South end of *Jackanapes-Lane*, they are told ready and excellently prepared without Bones in Gally-pots with Oyle, which upon experience may be thus done, for keeping very well for a Week or longer.

1. The Bones being taken out, chop them very ſmall with ſome Lemmon-Peele.

2. Take ſome Onyons and pared Apples, cut them ſmall, and Boyl them together till they be ſoft.

3. When they are cool mix them with the Herrings, with Oyle, Vinegar, and Pepper, and keep them cloſe in a Gally pot.

Theſe prove excellent to Eat, and may be a good ingredient in ſome Sawces.

The ſaid *Signior Dominico*, is noted for the many ſorts of Fiſh, which he *Marines*, or renders *Marinado'd*, and for the great Vend thereof, both abroad and at his own Houſe.

Of

Of Baked Herrings.

These are called Virginia-Trouts, *and are Sold in many Victualling-Houses at a penny each, and are thus to be Ordered.*

1. THirty or Forty pickled Herrings may be put a soaking into a Pan of fresh-water two days or less, in which time the water is to be changed twice.

2. In the Pan in which they are to be Baked, put in a lay with the head one way, and the tail of the next the other way, and the second lay cross these in the like manner, *&c.*

3. Then take a Pint of White-Wine-Vinegar, a Pennyworth of Cloves and Mace beat together, half a Pennyworth of the Powder of *Saunders*, and a couple of Onyons minced or cut small, put these into the Pan, and Baking it with the Wifes Bread, the Bones will be found dissolved, except the Back-bone, which will be very Crisp.

4. When cool, they are fit for Eating, with a Spoonfull of their Pickle mingled with Elder-Vinegar, and if to be kept, cover the Pot close.

Some after they are done, eat them without their Pickle, mashed small with some Lemmon and Oyle.

Of Bloated and Dryed Fish.

DIvers Summer fat oyly Herrings arrive, a Month before we have any from *Yarmouth*.

These the Fishmongers say are bloated as followeth, to wit, they sink them 3 or 4 hours in a Brine, made strong as hereafter mentioned, and then hang them up a drying in Chimnies, and 'tis said they will keep a Month and are very acceptable, namely when they are to be spent (after the manner of Larkes,) they thrust a Spit through their Gills, and hang them near a Fire; sometimes changing the

Spit

Spit end for end, to serve in the nature of Broyling on a Gridiron, or the Coals, to which it is much to be preferred; when these are thorough Roasted (pardon the Simile,) they are put into a Dish with good Butter and an Anchovie and a Shellot dissolved, and then served in.

After the same manner I have eat Herrings, Mackarel, Whitings, *&c.* which proved very good, tould, like barrel-Cod.

To mend the method aforesaid, a Tin frame might be used and placed in a Chimney, in the form of a Cupboard, but without a bottom, with two Doors, the one at the bottom (with a Pidgeon hole in it,) to open and make a Saw-dust and Small-Coal dust Fire, to be kindled or enlivened with Straw, and to draw in Air at the hole aboveſaid, which might have a little Door to prevent Cats.

The top of this Cupboard to be firm Tyn, with a Nossel or Snout in it of Tin like that of a pair of Bellows, covered over to prevent Soot, to which and on Ledges athwart divers hooks to be hung, whereto to hang the Fish, Sheeps and Hogs Tongues, *Bononia* Sawcedges, *&c.* to be dried.

And after this manner the Fishmongers may preserve much Fish, they can neither sell nor spend, provided it do not stink before they use the Remedy.

Of Thornback, Maids, or Skate.

AT *Whitby* in *Yorkshire*, *Robin-Hoods Bay*, *&c.* and in some parts of *Cornwall*, there is much of this sort of Fish caught in Summer-time, which they cure by only drying.

To wit, the Fish being slimy they drag it on the Sands, split it, take out the Guts, and hang it a drying in the Sun and the Wind; sometimes if the Weather be too moist, it may be annoyed by Flies and Maggots, to prevent which, one that had experience adviseth, to strew on the Dust of *East-India*-Pepper, which may be had at a Penny or three half pence a pound, and how well it mingled with Salt might save some kinds of Fish, might be an experiment the *East India* Company might have tried with little Charge.

At

At *Whitby* alſo I am informed, they make much *Hibirdine* of Cods caught in the *Offing*, ſalted with *Newcaſtle* Salt, and then dried in the Sun and the Wind, and 'tis ſaid it proves very white and good.

'Tis alſo affirmed, they barrel up ſome Herrings ſalted with that Salt, and abundance of young Cod or Codlings which are brought to *London*, to ſupply the want of barrel'd Cod, which ought rather to be ſpent.

And this I ſhould have inſerted ſooner, to wit in page 13, but had no account of it, from thoſe whoſe intereſt might have induced them to have imparted it.

Of Conger Eeles.

THey are in the Coaſts of *Cornwall* of a very large ſize, even a heavy Burthen to a Woman to carry, they are often found in Pits on the Sands when the Sea is out, and in regard they cannot retire are there caught, carried on Shore, ſplitted and gutted, and then ſo long dried in the Sun, that they may be reduced to a Powder, which goes off in *Portugal*, *&c.* and ſerves inſtead of Oatmeal; many miſcarry in the drying as proving full of Flies and Maggots.

Of Freſh and Barrell'd Cod.

THe Catching of them is beſt performed in Veſſels, called *Doggers*, burthen about 80 Tuns, with a Well like a Cullender in the middle, into which to put the live Cod, to bring them to the Shore, or Rivers Mouth; in which, without any ſuſtenance, (which they refuſe being in Captivity, they will live a fortnight, or longer, in Salt Water, but preſently dye in freſh-Water.

The manner of Catching may be ſuch as is deſcribed in Page 87. but ſome of our own Doggers, and the *Dutch*, (who have out this Winter 120 Doggers,) catch them in the manner following; namely,

Each

Each Dogger is furnished with 100 Lines, of 150 fathom long, each; which are bigger than *Flamborough*-Lines, or somewhat less than an Inch about.

To each of these are fastned 20 Snoods, *alias* Nossels, which are small Lines, with Hooks and Baits at them; the Baits about *Michaelmas*, (when this Fishing begins,) are Herrings, with which they may bait till the end of *November*, afterwards till *Lady-day*; (when this Fishing ends,) they bait with *Lampernes*.

The places where they are commonly caught, are upon Banks, where the Dogger may Anchor, the Principal is called the *Dogger-Bank*, against *Flamborough* Head; the manner thus: The Dogger being under Sail, Sails to Windward, and Veres, or Shoots these out at her Stern, all fastened one to another, with 12 Gan-Buoys to them all, and an Anchor to each Buoy, to catch hold in the ground, with Ropes to weigh them, fitted to each, suitable to the depth.

Moreover, there is a great Buoy at the hither end, called the *Ships Buoy*; when all are Veered out, the Dogger comes to an Anchor, and Veers out her Cable, to which the former range of Lines is fastned, and after she hath rid 10 or 12 hours, (beginning commonly at Night,) they begin to hale in their Lines, which they may be 6 hours in performing, and sometimes meet with a great draught of Cod, that which they catch first, or such as die in the Well, they Salt and barrel up as soon as they are dressed, and prepared for salting, as before mentioned in page 88.

They salt them well with refined Salt, laying them Circularly round the barrel with the Tails towards the middle, where to supply the Descent, a whole Cod is laid in; between each lay of Fish they put in a Lane of Salt, and so fill up to the Head which is well covered with Salt, where after 24 hours time they will settle and make room for more; and when the barrel is full they head them up full of Pickle, and they are sufficiently cured for these Climates.

These are acceptable in Foreign Countries, where it is customary to dress them with Oyle, and that because they are not over Salt, are firm, white, have a good tast, and will keep long.

Whereas

Whereas ſhould they be cured with *French* Salt, they would become dirty, yellow, and ſo mortifyed or pyned, that they are of no long Continuance.

If they are to be long kept, and carried into a hot Country, they ought to be packt very cloſe, with more Salt between each Fiſh than is uſual, filling up the Cask at the top with Pickle, or rather may be Repackt with freſh Salt and Pickle; as is mentioned in page 90.

Roes of Cod well Salted and Pickled are here neglected, but are ſaid to yield a good price in *France* to make Sawce withall.

When the ſame are to be uſed, bruiſe them betwixt two Trenchers, and beat them up with Vinegar, White-Wine *&c.* then let them ſtew or ſimmer over a gentle Fire, with Anchovies and other Ingredients uſed for Sawce, putting the Butter well beat up thereto: We our ſelves on the Coaſts uſe the Roes of Freſh Cod for Sawce.

The *Dutch* and *Danes* are ſaid to bring home from *Iceland*, whole Ladings of Roes to put into Ponds to feed Fiſh withall, and ſometimes they are bruiſed and thrown into Rivers, to raiſe the Fiſh.

THE COOKERY, OR Dreſſing of Fiſh.

There are many other excellent ſorts of large Fiſh, which might be treated of, as Ling, Mullet, Halybut, Haddock, Turbut, Sturgeon, &c. *But theſe being ſcarce on our Eaſtern-Shores, I am willing to defer what I have to ſay, till an other Edition, and proceed to the Cookery part, as judging it but neceſſary after ſuch a Harangue of Catching and Curing of Fiſh; and herein I am beholding to Mr.* John Bull *for the following Receipts, it being well known that he ſerved an Apprenticeſhip to a Cook, and hath been eminent for his Skill therein, which he hath put into Practiſe for about* 30 *years together.*

Stockfiſh

BEat it ſoundly with a Mallet for half an hour or more, and lay it three days a ſoaking, then Boyl it on a ſimmering Fire about an hour, with as much water as will cover it till it be ſoft, then take it up, and put in Butter, Eggs, and Muſtard champed together, otherwiſe take 6 Potatos (which may be had all the year at Seed-Shops;) Boyl them very

very tender, and then Skin them, Chop them, and beat up the Butter thick with them, and put it on the Fiſh and ſerve them up. Some uſe Parſnips.

The like for Haberdine and Poor-Jack, I ſhould be aſhamed of this Receipt if we had no better to follow, and think it too mean to mention any thing about Green-Fiſh or barreld Cod, but the watering or ſoaking before they are Boyled.

Oyſters.

The Deſcription of the Nature, Generation, and Ordering of Green Oyſters, commonly called Colcheſter-*Oyſters; the Reader may meet with in the learned Doctor* Sprats *Hiſtory of the* Royal Society, *page* 307, *&c. theſe raw being a general ingredient in what follows, obtain the precedency in Diſcourſe.*

To Stew Oyſters.

THoſe that are moſt fit and commonly Stewed are large Oyſters, ſome of which in opening bring away part of the Shell, and ſometimes ſome Dirt; to get quit of which, take them in your Fingers one by one, and waſh or gently rub them in their own Liquor, mingled with a quarter of a Pint of Elder Vinegar, putting them into a Stew or Sawce-Pan, into which put their own Liquor, after it hath been Streined (to cleanſe it) with an Anchovie and three or four Cloves, and let them Stew or ſimmer over a gentle Fire till they are enough, which may be in half an hours time, and when that's done, take a quarter of a pound of Butter melted apart with a Shellot, which put into a Diſh with them and ſerve them up.

To Fry Oyſters.

TAke a quart of Oyſters out of their Liquor, and waſh them in it as before.

Then ſtrein their Liquor, and ſimmer it up with an Anchovie; take three yolkes of Eggs, beat them up in a Porringer with a little Water and a little Flower, dip the Oyſters into it, and they will reſemble Fritters; then put them into a Frying Pan which comes hot from the Fire, covered with hot Beef-Suet, in which fry the Oyſters. then put them into their Liquor, ſimmering as aforeſaid with an Anchovie.

To pickle Oyſters for divers Months keeping.

LEt a quart of Oyſters ſtand a little while after they come out of their ſhells, then take them out of their Liquor, and waſh them in fair water, then put them into a Stew-Pan with their own Liquor, a pint of White-Wine Vinegar, a penny worth of Cloves, a little Lemmon or Orange-Peel, and 3 or 4 Coriander-Seeds, ſimmer them altogether, with a little Salt about the ſpace of half an hour, then keep them cloſe in a gally Pot, and in 4 or 5 days time they will be fit to Eat and look very white.

Otherwiſe according to Mr. Alcorn.

IN opening put the the Oyſters by themſelves, and the Liquor by it ſelf, let it ſettle, afterwards poure it off leaving a ſediment behind, then put them together adding thereto Water and Salt, with Bay-leaves, or ſuch other hot Herbs as are beſt liked, then let them ſimmer over the Fire ſo long till the Oyſter is of a white Colour, and till the Finn begins to ſhrivel or contract, then take them off and out of their Liquor, laying them ſingly till they are Cool, and likewiſe the Liquor Coöl, then put them into Barrels, tite Veſſels or Pots well luted, or if into an open Veſſel, poure on ſome ſweet Oyle.

This

This for common uſe, but to render them far more pleaſant to the taſt, and for longer keeping, inſtead of Water and hot Herbs, uſe White-Wine, Mace, or *Piemento, alias Jamaica* Pepper, and if you pleaſe a little ſliced Ginger, all to be ſimmered in the Pickle, which may continue longer on the Fire after the Oyſters are taken out.

To Stew Salmon.

TAke a Jowl of Salmon, waſh it very clean in an Earthen Pan, put it into a Kettle fit for it, with a Pint of White Wine Vinegar, half a Pint of fair Water, ſome Lemmon Peel, a bunch of ſweet Herbs, a penyworth of large Mace, three Wallnut-Tree-leaves (which may be always had at the Seed-ſhops,) a quart of Oyſters with their own Liquor, a Pint of Shrimps, and ſimmer all theſe for about an hour till they are enough, and then ſerve it up with the Liquor in a Diſh.

To dreſs a Cods-head, or a freſh Cod.

TAke it and put it into a Kettle, that hath a Cover fitted to it, into which put 4 Anchovies, ſix Whitings, a quart of Oyſters with their Liquor, a Pint of Shrimps, a pennyworth of Mace, two Shellots, and after it hath ſimmered over the Fire about an hour, take out the two Jaw-bones, put in half a pound of ſweet Butter and ſerve it up. The like for a whole Cod, a Turbut, a Mullet.

To Stew Carps.

TAke two living Carps, prick them in the Tail with a great Pin, rub the Scales off with a handful of Salt as clean as may be, lay them in a deep Pan, and put to them a quart of Clarret which makes them Bleed, and kills them; open their Bellies and take out their Roes, then put them into a Kettle with their Roes in the middle, into which put a quart of Oyſters, two Anchovies, a bunch of ſweet Herbs, Stew them

them over a gentle Fire for about an hour, in which time they will be almoſt enough, and then put in a quarter of a pound of freſh Butter, take out a little of their Sawce, into which put three yolks of Eggs beat up together, then putting altogether in a Diſh ſtir it about and ſerve it up.

To Stew Soals.

TAke three pair of large Soals, put a little Salt on the Tail of each, and rub it hard, and the Skin will give way to be taken off; ſcrape the Scales off the Bellies, and waſh them very clean in fair Water, dry them with a Towel, and put them into a Stew-Pan one by one, into which put half a Pint of White-Wine, a pennyworth of large Mace, a bunch of ſweet Herbs, (to wit, Penny-Royal, Time, Sweet-Marjoram, Winter-Savory,) a Pint of Oyſters with their own Liquor, three Anchovies, ſimmer them over a gentle Fire, and in half an hours time they may be enough: When you take them out of the Stew-Pan, ſcrape on a little bit of Nutmeg, ſqueeze on the juyce of a Lemmon, and put in a quarter of a pound of ſweet Butter, and ſet the Fiſh with their Broth a little while over a gentle Fire and ſerve them up.

To Fry Soals, &c.

TAke ſix Soals and put them into a Frying-Pan hot, with Beef-Suet, there let them Fry about half an hour. The like with ſix Whiting-Mops, and a quarter of a hundred of Smelts.

In the Liquor in the Pan, Fry a quart of Oyſters and likewiſe drein them, take that Liquor that dreins from the Oyſters, and ſtrein it to avoid the Grit and Shells; that done, ſet it over a gentle Fire in a Sawce-Pan with two Anchovies, and when it comes off, put in a half a pound of ſweet Butter, and ſqueeze in the juyce of a Lemmon, put all into a Diſh ſet over a Chafingdiſh of Coals, and ſerve them all up together hot, ſetting the Soals an end like a Sheaf; as alſo the Mops, and Garniſh with the Smelts and ſlices of Lemmon.

Fryed

Fryed Maycrill.

SPlit them on the Back, put them into the Frying-Pan hot, with Beef Suet, and when Fryed, make a Sawce with Anchovies, a little Butter, and a little Lemmon.

To Stew Eels.

TAke ſix great Eels and put them into a Kettle, with half a Pint of White-Wine, half a Pint of fair-Water, a pennyworth of Mace, and a pennyworth of Cloves; hang the Kettle two hands high over a gentle Fire, and let them Stew about an hour or leſs, then take ſome of their Liquor and Stew it up with an Anchovie, put it to the Eeles with ſome ſlices of Lemmon and ſerve them up.

Collar'd Eels.

TAke ſix large Eels, Boyl them up very well, in a Pint of White-Wine and a Pint of Water, with 6 or 8 Lawrell or Bay-leaves, a pennyworth of Cloves, a pennyworth of Mace, a pennyworth of white-Pepper, a little Salt at top; when they are taken off, put them in a long Pot with their own Liquor which muſt cover them over; cover the Pot very cloſe and they will keep divers Months.

To make a Broth with Eels, being a Gentlewomans Receipt.

TAke 12 Eels and put them into a Pipkin, with two quarts of Water a little refined Salt, ſome whole Pepper, a blade of Mace, half a Nutmeg, a bundle of ſweet Herbs, let them Boyl very well, then ſtrein them, and into the Liquor ſo ſtreined put in a quarter of a pound of Currans, then Boyl it again, and when

when the Currans are Boyled enough, put in a little White-Wine and White-Bread to make it thick, and a little Sugar if you pleaſe.

After the ſame manner Whiting-Broth is made; the Eels themſelves are ſuppoſed to be ſo much Boyled, that there is no further uſe made of them.

To Marine or preſerve Fiſh, as Eels, Flounders, Soals, &c. after the Italian *manner, called Marinading, a Receipt imparted by the Worthy Mr.* Alcorn.

BOyl the Fiſh gently, in a Liquor made one half with fair Water, one quarter of White-Wine Vinegar, and one quarter of White-Wine, of which Liquor make ſo much as will more than cover the Fiſh, and into it put ſome Bay-leaves, with ſuch Spice as is beſt liked; ſome put in a little Nutmeg with *Piemento* or *Jamaica* Pepper, others uſe Ginger in lieu thereof, then take out the Fiſh, and let them and the Liquor cool apart, afterwards put them together in a Veſſel with Sallad Oyle at top, Time and Roſemary may be likewiſe uſed, and they will keep well in the cool for two or three Months.

Divers Sea-Fiſh may be preſerved after the ſame manner, as Mullets, Sea-Eels, Place, *&c.*

The ſame kind of Pickle after it is cool, will preſerve cold Roaſted-Fowl, as Pidgeons, Ducks, Teal, and Widgeons, *&c.*

Otherwiſe to Marine Carps, Mullet, Garnet, Rochet, or Wale, according to a Receipt found in Printed Books.

TAke a quart of Water to a gallon of Vinegar, a good handful of Bay-leaves, as much Roſemary, a quarter of a pound of beaten Pepper, put all theſe together, and let them ſeeth over a gentle Fire, and ſeaſon them with a little Salt, then Fry the Fiſh in Sallad Oyl till it be enough, put them into an Earthen Veſſel, laying the Bay-leaves and Roſemary between and about the Fiſh, and that done poure in the Broth aforeſaid, and when it is cold cover all cloſe up for keeping.

Directions

Directions for Salting of Fleſh and Fiſh for long keeping, viz. *Beef and Pork, according to the common way.*

1. AN Ox being driven in cool one day, is ſlaughtered the next, quartered, and after it hath hung a convenient time to cool, is cut into four pound pieces.

2. The ſame are very well rubb'd with Bay Salt, then put into Bins, Cribs, or Receptacles like Mangers, and almoſt buried in Salt, for the ſpace of a Fortnight, three weeks, or longer, that the bloody Pickle may run away waſt.

3. Then the Meat is again well rubb'd and pack'd or trodden into Cask, on a Cloath or Skin, with Salt betwixt every Lane or Lay, and being headed up is thrown by in Store-houſes, for ſix weeks or two Months time, but ſometimes will not keep a Fortnight, which is known by the ſcent at the Boung.

4. Then when the ſame is to be Repackt, they turn the Boung of the cask downward, that all the bloody pickle may drein away into a waſt Current.

5. Then all the Meat is taken out to be packt into Cask, ſmelling each piece, which is again well rubb'd with Salt, each lay being cloſe packt with Salt between; and when full is roll'd to the pickling place to be pickling.

The Pickle is thus made.

Diſſolve Bay Salt in freſh-water, ſo long and to ſuch a height, till upon Boyling with a briſk Fire, and ſcumming off great quantities of Dirt and Filth, it is in a readineſs to Kern or turn to Salt again, which is known by a Cream or Ice at the top. Then empty it into Coolers.

6. When the ſame is thoroughly Cold, often fill up the cask at the Boung-hole and the Meat is cured.

Beef and Pork with refined Salt, (made of Brine raised by the Sun) according to the new way.

1. THe Meat is cut out as before.

2. Rub it well every where, ſtrew Salt at the bottom of the Cask, and put in a Lay, which covering with a Skin or Cloath, tread or pack it faſt in, ſprinkling on more Salt, and ſo up to the top, where crowd in as much Salt as you can, and head it up.

3. Then fill up the Cask often at the Boung with Brine, that may ſearch every part.

The Brine is thus made.

Mingle Salt with Water, and let it be diſſolving two or three days time, ſtirring the Salt at the Bottom, and if there be more Salt than the water can melt, it will be found at the bottom, and ſerve for a ſecond uſe.

This Brine is at its proper height, when the Salt is but juſt diſſolved, or when a piece of Beef will ſwim in it, or an Egg the like but half ſunk in it.

4. When the Meat is to be carried a long Voyage, through a hot Climate, it were fit it ſhould be cloſe Repacked with dry Salt, for ſhould the Brine be loſt by Leakage, the Meat would grow ruſty.

The Excellencies of this way above the former, (when there is no Repacking) are,

The Blood and Gravy is preſerved, much time, trouble and Salt ſaved, and the Meat will be little or no ſalter at a Year, than at a Months end.

To Salt Beef or Pork with the ſaid Salt for Houſehold Expence.

IF it be a Chine or ſingle piece of Beef, if the ſame be moiſt, rub the Salt well on, but if the Meat be dry, dip it into, or moiſten it with water, before the Salt be rubb'd on.

Otherwiſe

Otherwiſe make a Brine as above directed, ſo ſtrong as the Meat will ſwim in it, and there is no more to do but to keep the Meat ſunk in it.

This I know to have been the practiſe with Beef in his Majeſties Boyling-Houſe, when he was Prince of *Wales*, and 'tis at preſent the practiſe of ſome Inns of Court and Colledges; here it may be noted, that to keep Meat ſunk a day or two, will render it ſalt enough for preſent ſpending, yea and for long keeping, if after the Meat be taken out of the Brine, it be rubbed with Salt, and hung up in a warm Kitchin, ſee what is ſaid to this purpoſe in page 6, 11.

After the Brine hath been twice or thrice uſed, Boyl it over a brisk Fire and skumit, and after it is thorough Cold it will ſerve again.

I have cauſed this method of ſalting of Meat in Brine, to be tried by Mr. *John Bull* aforeſaid (and others) with *Portſea* Salt, on a Loyn and Spare-Rib of Pork, which were both rendred very red; and in Roaſting we found the Gravy kept in, and the very skin of the Loyn of Pork to Eat tender: He alſo ſunk a Gooſe in it 24 hours, which was well ſeaſoned, whereas according to the common method, there ſhould have been about half a pound of Butter, with Salt put into the Body to have ſeaſoned the Gooſe in Roaſting; he likes this way ſo well, that he much prefers it to the old Cuſtom of dry ſalting of Meat.

He hath alſo ſunk a Leg of Mutton a Night in Brine, that was afterwards Roaſted, and then it was well ſeaſoned to be Eat without Salt.

To Salt Bacon with refined Salt.

RUb Salt well on the Flitches, and put them in a Trough, laying the Riny ſide downwards, and ſometimes change the uppermoſt to lie loweſt, and ſo the reſt or middlemoſt, that the drippings of all may be Comm nicated. And thus continue for a Fortnights time, and then they muſt be Deeſed, or ſmoke-dryed for a Fortnights time longer, or divers Months, thoſe that drive a great Bacon Trade, raiſe great Piles with Salt between each Flitch, and much upon the uppermoſt, and Deeſe them no faſter from time to time than they can find vend at Market.

Martinmaſs Beef.

IT hath its Denomination from the common time that Country Farmers ſlaughter their Cattle, which they deſire to Salt and dry in large Flitches or Pieces, in a Chimny or Deeſe, to ſpend at leaſure, which is thus performed; let it be well rubb'd in, or dry ſalted for 8 or 10 days time, then it may be dried with Wood-ſmoaks, or in a Chimny Stove with Saw-duſt, or on Racks in a Fire or Deeſing-roome.

The Farmers Boyl it, and eat it with Sallet or Boyled Herbs, or raw Sorrel with Apples and Bread well pounded together, with Vinegar put to it, others ſlice it and Fry it with Eggs, and if thorough dry, divers eat thin ſlices of it with Bread and Butter.

To Salt Beef and Neats Tongues Red.

Portſea-Iſland *yields a Red-Salt proper for this purpoſe, which hath been Sold at a Salt-Warehouſe at* Puddle-Dock. *but without ſuch Salt!*

LAy the Tongues and Beef in a Fray, and almoſt cover them with Salt till there be a Brine, then diſſolve a ſmall quantity of refined Petre Salt in it; to ſix Tongues allow half an ounce or more, let the Tongues or Beef lie 12 hours on either ſide, and it gives it a Redneſs.

The Beef thus made Red, is either proper for drying, and is then called Hung-Beef, or for Baking to make Collar Beef, and the Tongues for drying, the manner of making Collar Beef, the Reader may meet with in page 11, of a Book called *the Compleat-Cooke*. And here it may not be improper to make a little Digreſſion.

About

About Salt-Petre.

WHich of its self is a saltish Liquor derived from Earth, and we are informed in the *Philosophical Transaction*, N° 6. to this purpose; that in the *Moguls Dominions* chiefly about *Agra*, and the Villages heretofore Inhabited but now deserted, they derived it from three sorts of Earth, to wit, Yellow, White, and Black, out of which they obtain the best, as most free from common Salt, to this putting water, they tread it into a Pap, that the water may carry away a salt Liquor with it, which afterwards Christallizes into Salt-Petre, then they boyl or refine it twice or thrice over, as they desire it courser or purer, frequently scumming it, till it Christallizes into Salt-Petre, which they put into Earthen Pots, and set them abroad in clear weather, that what impurity remains may subside or fall to the bottom, and afterwards break the Pots, and expose it to the Sun to dry.

In *England*, tubs are filled with dark salt-Earth, got out of Cellars and the Floores of Pidgeon-Houses, *&c.* to which putting water it dreins away the saltish humour, into another Tub or Receptacle underneath standing under the dripping hole of the uppermost Tub.

The Liquor thus obtained, as also the Salt-Petre brought over by the *East-India Company*, resembling a dull reddish Sand, or course *Muscovada* Sugar, is boyled up to scum and refine the same, as many times as is thought necessary.

That which falls to the bottom of the Pan, is called (as I am informed) Petre-Salt, or the Salt of Salt-Petre, it resembles common Salt, hath little or no taft of Saltness, but is efficacious in turning what is salted therewith Red, as *Neats-Tongues*, *Hogs-Tongues*, *Martinmass* and *Collard-Beef*, yea and out of it a Spirit may be drawn as red as Blood, it is commonly sold in Salters-shops at *Billingsgate*, &c. at a reasonable rate, this sort with refining or hard boyling, makes Clods or Lumps and Flakes which are as big as *Loaf-Sugar* or *Allom*, which sort being much the dearer, is also used by some out of ignorance, (though not improperly) for the salting of

Neat

Neats Tongues, *&c.* as aforesaid, this sort is commonly sold by Drugsters under the name of Salt-Petre refined, the expence of the Salt of Salt-Petre being but small, the Owners or Employers commonly give it the Workmen.

The other Liquor in the Pan at the same time boyled to a due Consistency, exposed to the cold will shoot into Christals, which they take off and put into flat Brass Pans, where it granulates of it self and makes Gunpowder for Ordinance.

And if the Liquor be refined to a greater height, it serves to make Powder after the same manner for Pistols and Fowling-Pieces.

The main difference betwixt them is, that Salt-Petre is Volatile and takes Fire, the other fixt and void of such quality.

We have Salt-Petre also from *Barbary*, but it is fouler and leaves a greater quantity of fixt Salt than that we have from the *East-Indies*.

I have heard it asserted in his Majesties late Council of Plantations, that enough and good Salt-Petre may be had from *Montserrat*, &c.

Salt-Petre Salt as to goodness hath no great Repute, yea common Salt mingled with Urine, Lime and Earth, cast up and kept in Banks for six Months or longer, much increaseth Salt-Petre; whence 'tis probable that our Sea-Muds mentioned in page 19, may yield good quantities of Salt-Petre.

In a Printed Letter of Mr. *Gabriel Plat*, to Mr. *Samuel Hartlib*, we read the Author asserting, that he knows by experience that Salt-Petre is the most rich Compost in the World to multiply Corn, and that he hath seen fifty pounds worth of Salt-Petre extracted out of a Vault at *Dowgate* not very spacious, which was formerly a House of Office, and not emptied, till the matter was throughly rotten. And seeing *Sal-Ammoniac* yields a good rate in *England*, namely about half a Crown a pound, and is much used by *Dyers*, *Tinmen*, *&c.* and may be made here of Salt, *&c.* I shall also digress a little about the same, and insert a Paper imparted by the Learned Chymist Mr. *Molt*, to Mr. *Dacres* a Drugster in little *Lumbard-street*, *viz.*

Sal-

Sal-Ammoniac.

THe name of Ammoniac is given to this Salt, from the Temple of *Jupiter Ammon*, or *Ammos*, situated in the midst of the Deserts of *Lybia*, because this Salt was formerly found sublimated upon the superficies of the burnt Sands of that Country.

The Urine of *Camels* that generally travelled that way in *Caravans*, in the *Pilgrimages* that were continually made to this Temple, was the first and principal Matter, and the acid Salt of the Air, which impregnated this Salt in the Night time, by its Union stopped the volatile Parts, which the heat of the Sun had otherwise dissipated; but having not this Salt of the Ancients, we are forced to use this fictitious Salt made thus.

Take 7 pound (or Pints of Urine,) one pound of common Salt, and two pounds of Wood-Soot, beat the Salt and Soot to Powder and put them into an Iron Pot, pour the Urine off them, boyl it to dryness, then beat the dry Mass and sublime it according to Art.

That I take to be meant of putting it into a Crucible, and evaporate or burn away the Moisture.

COOKERY of FLESH.

Many House-Keepers may meet with this Book, to whom possibly the following Receipts may not be unwelcome.

To pickle Cucumbers the way usual amongst Oyle-Men.

BUy a thousand Cucumbers of such we call long-*English* (not *French*) Seed, (these are about thrice as dear as the ordinary ones:) wash them very clean and lay them dreining in a Sieve, put them into a Pot or Vessel in lays, to wit

at

at the bottom, and between each lay diſtribute about ſix pennyworth of Dill and Fennil, then make a Brine of refined Salt, with five gallons of Beer or Rape-Vinegar, (for White-Wine is too corroding) ſo ſtrong that it will bear an Egg, in which diſſolve three ounces of Roach-Allom, then poure this pickle among the Cucumbers in the Pot or Veſſel aforeſaid, which cover cloſe or head up, and therein they may lie from three Weeks to ſix Weeks, then take the pickle out, boyl it on a brisk Fire and ſcum it, and put it in again to the Cucumbers hot which cover cloſe as before, and upon experience 'tis well known they will keep long and be green; if they be not green enough, boyl the pickle again, and put it to the Cucumbers as before.

Moſt excellent Cucumbers, large and ſoft Red-Herrings, ſuch as are deſcribed to be good in page 67, with Rape and Elder-Vinegar, are to be had at the Shop of Mr. *Joſeph Pierce*, Oyleman at the Sign of the *Swan* at *Holbourn-Bridge*.

To pickle Cucumbers otherwiſe, according to the Receipt of Mr. John Bull.

TAke ſix pennyworth of Dill and Fennel, an ounce of Coriander-ſeed, two pennyworth of Cloves, two pennyworth of Mace, an ounce of white-Pepper, two ounces of Ginger, and about 4 gallons of Elder-Vinegar, (that is to ſay Beer or Rape-Vinegar, with the white-flowers of Elder ſteeped in it, to be had at about a Groat a gallon at Still ſhops:) a handfull of Wallnut-Tree-leaves, to theſe put a gallon of pickle made with Salt and Water ſo ſtrong that it will bear an Egg, boyl all theſe together, and let it ſtand while it is cool, then put it into a Pot, with 1000 Cucumbers as aforeſaid well waſhed, and they will be good in few days; after a week or more the pickle ought to be taken out, boyled, ſcummed, and put in again.

To

To pickle Samphire.

The Isle of VVight *yields plenty of it, and the* Port-Sea *Saltworks most excellent, as is mentioned in page 32, which Mr.* Alcorne *pickleth in the manner following.*

1. MAke such a Liquor of Water, Elder-Vinegar, White-Wine and Salt as is pleasing.

2. Let the *Samphire* be scalded in it, and when the Vessel is taken off, cover it with a Cloath to keep the steam in for a quarter of an hour, and it will be tender, but if it be required hard, and not to be boyled again, cover it not at all.

3. Then take the *Samphire* out of the Liquor, and let both cool by themselves, and afterwards put them up in a Vessel close covered to keep for use.

The Herb may be preserved without scalding, but when it is to be used, it must be boyled.

To pickle Purslayn.

TAke Purslayn with their Stalkes, and boyl them tender in fair water, and lay them a drying or soaking, when done, put them into a Gally-pot, and make a Brine with Salt and Elder-Vinegar to put to them, so as to cover them, and keep the Pot close stopt.

To make a Leg of Pork serve instead of a Westphalia Ham.

CUt it long like a Westphalia Ham, beat it very well with a Rowling-Pin, then put it into Brine (as before described page 122,) eight Days and Nights, then hang it up a Week a drying in a Stove, as is mentioned in page 110, and when to be used, Boyl it,

To Stew Beef Steaks.

TAke three pound of any good Beef, beat it well with a Rowling-Pin, and put it into a Tin-Stew-Pan, (of which those that have double bottoms are durable,) with half a pint of Ale, and half a pint of Clarret, with a shred Onion, and set it at two hands distance over a gentle Fire, and when it is half ready, which may be in half an hour, put in a blade or two of Mace, a bunch of sweet Herbs, an Anchovie, and when ready, which may be in half an hour or more, take the Liquor out, and put into it a little fresh Butter, Nutmeg, and the juyce of a Lemmon squeezed on it, and serve it up.

To fry Tripes.

TAke a good fat Tripe, and sowce it three days in a salt Brine as before described, then put it into a Frying-Pan of hot Beef-Suet to be scalded, when that's done, take out the Tripe and cut it into slices, then dip them into a Batter made of a penyworth of Flowr, and six yolks of Eggs beat up in a Porringer, afterwards Fry it, and serve it up as hot as you can.

To make Pease Potage.

Going to VVestminster *sometimes, I meet with a dish of such as are very pleasing, possibly as good may be made by some of the following Receipts.*

TAke a quarter of a peck of dry blow Pease, and boyl them with a piece of Bacon, and some dryed Mint; when they are half boyled, which may be in an hour throw in a quart of cold Water to break them, and if they be too thick, put in more; take a Cullender and strein them through it, then take a hand-

ful of Sorrel, a handful of green Spinnage, ſhred them a little, put in an Oynion with ſome Cloves ſtuck in it, a little Pepper, Salt, and Lemmon Peele ſhred, put all theſe into a Skillet, boyl alltogether quick up, which may be done in an hour more, and ſerve them to the Table with the Bacon in.

White Peaſe Pottage with Balls.

BOyl a quart of white-Peaſe mingled with Mint, in a little quantity of Water, till they are broke, and ſtrain them through a Cullender, leaving the huſks behind, to which ſo ſtrained, put a quart of new Milk.

To make Balls to put into them.

Take half a pound of lean Veal, half a pound of Bacon, a little Beef-Suet, a few tops of Time and Winter-ſavoury, ſhred them alltogether very ſmall, grate in a Nutmeg, put in a raw Egg or two, work them well up, and boyl them by themſelves, in a little of their own or Beef-Broth, then take ſome thin ſlices of Bacon, Fry them, and put them into the Peaſe-Broth and Milk aboveſaid, with a little beaten Pepper, Cloves and Mace, a piece of Butter, two or three ſlices of Ginger, a little Lemmon-Peel, and three Anchovies ſhred ſmall, a *French*-Roul in ſlices, and boyl all up together, and if it prove too thick, put in more Milk, with two or three ſlices of Lemmon.

Peaſe Pottage, with a ſtrong Broth, according to Mr. John Bull's *way.*

TAke a ſhin of Beef, and a knuckle of Veal, boyl them in water ſufficient, with Cloves and Mace, 4 or 5 hours, till they are tender, then ſtrain that Liquor apart, giving the Meat to the Poor; and into it put 4 quarts of white-Peaſe, and boyl them therein, with ſweet Marjoram, Penny-Royal, and Spearmint a pennyworth of each, and when the Peaſe are

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ful of Sorrel, a handful of green Spinnage, ſhred them a little, put in an Oynion with ſome Cloves ſtuck in it, a little Pepper, Salt, and Lemmon Peele ſhred, put all theſe into a Skillet, boyl alltogether quick up, which may be done in an hour more, and ſerve them to the Table with the Bacon in.

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almoſt boyled, or rather have ſimmered an hour, put in a little minced Charvil mingled therein. Laſtly, ſtrain them, and ſerve them up.

A-La-mode (or Larded) Beef.

TAke ſix pound of Buttock-Beef, beat it well with a Rowling-Pin, and let it lie one Night in a Brine (made of Salt and water as before,) then ſlice the Beef and a pound of Bacon, put them into a Pot in Lays, with ſome Cloves, Mace, Cinamon, Nutmeg, and ſome ſweet Herbs ſhred betwixt each Lay, (to wit,) Penny-Royal, Time, and Winter-ſavoury.) Laſtly, put in a pint of Ale, and let the whole be Baked with the Wifes Bread. This will have a Jelly about it, and may be eat cold, or hot if ſtewed upon Embers.

Potted Beef to ſerve inſtead of Potted Veniſon or Fowle.

TAke ſix pounds of Buttock Beef, Parboyl it, alſo take ſix pounds of Beef-Suet, and put them one Night in pickle (as aforeſaid,) next Morning beat them hard with a Rowling-Pin into a Maſh, then take Penny-Royal, ſweet Marjoram, Time, and Winter-Savoury, to the value of two pence, and Cloves, Mace, and white-Pepper, to the value of a penny each, mingle all theſe together, ſtrew them on the Meat, and Bake it gently in an Oven; when it comes out, take it from its Gravy, and Pot it up with Butter on the top for keeping.

To Stew a Fillet of Veal.

CUt it into 20 or 30 ſlices, and lard them all with Bacon, on which, ſtrew on a little minced Time, and Penny-Royal, put them into a Stew-Pan, with a blade or two of Mace, a pint of Oyſters with the Liquor in them, two or three Anchovies, a Shellot, a pound of Sawſedges, and ſtew or ſimmer them

them over a gentle Fire, and when they are enough, which may be in an hours time, take them out and Diſh them, and put in a pound of freſh Butter, ſtrew on ſome Lemmon and ſerve them up.

To Roaſt a fillet of Veal.

BEfore it is laid down, ſtuff it with Balls made of ſome of the Knuckle, chopt very ſmall, and mingled with yolks of Eggs, ſweet-Herbs, and Spice beat all together; in the Roaſting throw on a little Floure, and when 'tis Roaſted enough, ſerve it up with ſlices of Lemmon, and Anchovie Sawce, to wit, ſimmer two Anchovies in a little White-Wine.

To make a Leg of Veal ſupply the want of a Shoulder.

TAke the brawn and cut it over the Knuckle, and ſcewer it up, take a pennyworth of Penny-Royal and Time, a pennyworth of Cinamon and Cloves, half a pound of Beef-Suet, a Pippin ſliced ſmall, chop all theſe together with four yolks of boyled Eggs, beat them all up together with a little fair-Water, and a pennyworth of White-Wine, and a little Flour to harden them, with a little bit of Nutmeg, make them into little Balls like Nutmegs, and make holes with your Knife in the Meat, and put or ſtuff them in, and when Roaſted, ſerve it up with Anchovie Sawce, and a little Lemmon.

Minced Beef to Eat with Spoons.

TAke two Ribs of Beef which may weigh about ſix pound, cut the Meat off the Bones, and chop it very ſmall, and put it into a Stew-Pan, with a pound of Beef-Suet minced ſmall, into which put the following Ingredients, namely two pennyworth of beaten Cloves and Mace, ſix corns of white-Pepper bruiſed, half a great Oynion minced very ſmall, a farthing-

farthingworth of Time, the like of Penny-Royal, both chopt very small, half a pint of White-Wine, a pint of fair-Water, two Anchovies, let them simmer an hour over the Fire, and when done, squeeze in a Lemmon, and throw on a little grated Nutmeg.

A Pottage.

TAke a knuckle of Veal, a shin of Beef, 12 Cocks-heads washed in hot water, then scald them, split their heads, pick off their Feathers, and take out their Eyes; moreover take 6 Gizards of Pullets, 2 pound of Sawsedges, a pint of Oysters, a blade or two of Mace beaten, a pound of Bacon in little slices, an Onion, and a bunch of sweet-Herbs both cut small, a pint of White-Wine, and three quarts of fair-Water, put all in a Pot close covered, simmering over the Fire above an hour, then take out the Beef to give to the Poor, the knuckle of Veal (which will turn to a Jelly), and the Sawsedges are to be put in the middle of the Dish, with the Broth, into which put a penny-Rowl grated.

A Frigacy of Rabbets or Chickens.

TAke two Rabbets, quarter them, break all their Bones, clap them into a large Frying-Pan with a Cover, into which put a pint of White-Wine, a pint of fair-Water, half a pound of Bacon thin sliced, two Anchovies, a small bunch of sweet-Herbs to the value of a farthing, chopt small, two pennyworth of Capers, let all these simmer or gently Fry an hour, then take half a Porringer of the Broth, beat it up with the yolks of six boyled Eggs, put all in a Dish, and squeeze on the juyce of a Lemmon,

Hang

Hung-Beef.

TAke ſix pound of the leaneſt Beef that is, beat it very well with a Rowling Pin, put it into Pickle or Brine, as deſcribed in page 122, eight days, take it out, and dry it very well with a courſe Cloth, ſprinkle upon it a pennyworth of beaten Cloves and Mace, put a ſtring through it, and hang it up three weeks in a Chimny over a Wood or Sawduſt Fire, till it be thorough Dry, this is to be cut into very thin ſlices to cover Bread and Butter with, and ſo Eaten. The Stove mentioned in page 119, is more proper for this Work than a Chimny.

To preſerve a Breaſt of Veal in Pickle for three Months keeping in the Summer time.

TAke as much Spring or Conduit-Water as will cover it, let it Boyl, and then take it off and let it cool, take two quarts of that Water, a quart of Elder-Vinegar, a pint of White-Wine, ſome Lemmon Peel, a pennyworth of whole Cloves and Mace, a ſtick of Cinnamon, put all theſe together and boyl them, and when it is cold, put the Breaſt of Veal into an Earthen Pan, and cover it with this Liquor, into which put half a handful of Salt, cover it up cloſe, and it will be fit for Eating in a Week, or for keeping three Months as aforeſaid.

To preſerve a Haunch of Veniſon that will not keep.

DIg a hole in the Garden or Celler, and put a Colewort leaf under it, and another above it, and cover it over with Earth for 24 hours time, and when you take it up, ſtuff it with Beef-Suet chopt ſmall, mingled with a pennyworth of ſweet-Herbs, to wit, Penny-Royal and Time alſo chopt ſmall, with a little bit of Nutmeg grated amongſt them, and then it may be either Boyled or Roaſted; if Boyled, it wants no Sawce, if Roaſted, the Sawce following may be uſed, *viz.*

A penny Loaf grated and put into fair water, with a ſtick of Cinamon, a ſprig of Roſemary, a pennyworth of Red Wine, boyl all theſe up, put them in a Diſh, with a bit of ſweet-Butter, and a little Sugar, into which lay the Meat, and ſerve it up.

To make Bononia *Sawſedges.*

TAke 6 pound of Buttock-Beef, 6 pound of Pork (Belly-pieces,) pare it off the Ribs, let all this ſimmer or Parboyl over a gentle Fire about an hour, then take three pound of Beef-Suet, three pennyworth of Cloves and Mace, a pennyworth of Nutmeg, as much Salt as will juſt ſeaſon them, of Sage and Penny-Royal a pennyworth, a half-pennyworth of Time, a pennyworth of beaten Cinamon, mingle the Meat and all this together, chop them ſmall, and put them into Ox or Cows-guts prepared, and dry or ſmoak them 3 or 4 Days in a Tin-Stove, ſuch as is mentioned in page 110, over a Sawduſt Fire.

To prepare the Ox-Guts.

WHen they come hot out of the Beaſts Belly, put them into fair-Water and Salt, cut them into ſeveral pieces and turn the inſide outwards with a Stick, for 3 or 4 days together waſhing them untill they are rendred white, then put in the Fleſh and tye them up.

Guts that are to to be Exported after they are waſhed, ought to be Salted and Pickled.

Sawſedges thus made are (without any other dreſſing) to be Eat cold with Muſtard. One, like a Hogs-Pudding that coſts but 3 pence, may ſerve as a Reliſhing bit to 3 Perſons in a Tavern; I reckon 4 of them to contain more, and better Meat than a cold Neats-Tongue, and believe they will become common.

☞ Theſe with Sheeps, Hogs, Neats Tongues, Hams, Bloated-Fiſh, *&c.* are to be had of Mr. *John Bull*, mentioned in page 114, who keeps an Ale-Houſe near the *Fleet* on the Eaſt-ſide.

Of

Of Butter.

DIvers abuſes committed in the Packing and over-Salting the ſame to make it weigh heavy, occaſioned a Law to be made for redreſs in the 14 of *Car.* 2. *Chap.* 26. where we find the Complaints are of this Nature.

1. *Fraud committed in the Packing up bad and decayed Butter, with ſound and good, in Veſſels and cask unuſal, and called by wrong Names; a Kilderkin weighing from* 26 *to* 28 *pounds, a Firkin from* 10 *to* 14 *pounds, the Pots from* 7 *to* 9 *pounds.*

2. *And theſe irregularly weighed with Stones, Iron-Wedges, Bricks, and other unwarrantable Weights.*

3. *Hence the Commodity (whereof much is tranſported beyond the Seas) lies under a bad Repute, abroad and at home, becomes a great abuſe to his Majeſty in the Victualling of his Navy, Merchants in Victualling their Ships, and to Houſholders who buy the ſame for their Expence; For redreſs whereof it was Enacted, That after the firſt of* June, 1662.

1. *Every Kilderkin ſhall weigh* 112 *l. neat or above Averdupois, beſides the tare of the Cask.*

Every Firkin 56 *pound beſides the weight of the cask, and every Pot* 14 *pound beſides the weight of the Pot, all of good and Merchantable Butter.*

2. *That no Butter which is old or corrupt, ſhall be mixed or packed up into any Kilderkin, Firkin, or other Cask, Veſſel, or Pot, whatſoever with any Butter which is new and ſound, nor any Whey-Butter, ſhall be packed or mixed with any Butter that is made of Cream, but to be packt ſeparately, ſo that each cask or Pot of Butter, ſhall be of one ſort and goodneſs throughout.*

3. *No Butter to be ſalted with any great Salt, but all to be ſalted and ſavoured with ſmall Salt, nor ſhall more Salt be intermixed with it, than is needful for its preſervation, upon pain of forfeiture of the Butter falſe Packt, and ſix times the value of what ſhall be wanting in weight.*

4. *Cheeſmongers and others ſelling Butter, ſhall deliver the full quantity of Kilderkins, Firkins, Casks, and Pots, and the due quality thereof, and none ſhall Repack Butter for Sale, upon forfeiture of the double value for ſuch Repacking.*

5. *Farmers and others ſhall pack their Butter in ſufficient and well ſeaſoned Casks, which ſhall be marked with the firſt Letters of the Chriſtian Names, and Sir Names of the Sellers, and the weight of the Butter, upon Penalty of forfeiting Ten-ſhillings for every hundred weight of Butter not ſo marked.*

6. *Potters ſhall mark their Pots, with their Names and the weight of the Pot, and ſet the firſt Letter of their Chriſtian Name, and Sir Name, upon pain for every default 12 pence, and Farmers ſhall not ſell Butter packed in other Pots, upon pain of two ſhillings for every default.*

One half of the Penalty to go to the Poor of the Pariſh, where the Offence is committed, and the other half to the Proſecutor; and all Suits on this Act to be commenced within four Months after the Sale of ſuch Butter.

The frequent complaints our Fiſhermen make, of the badneſs of the Butter they carry with them, have occaſioned theſe Recitals.

To preſerve Butter freſh for long keeping.

MAke a Brine as before preſcribed, and keep the Butter ſunk in it.

About the beginning of *May*, I cauſed this to be put into Practiſe, and potted up many Lumps of Butter, bought freſh out of the Market, and they all kept ſweet, freſh, good and well taſted till about *Michaelmas*; at which time the Brine eating through the Pot, they were ſpent, and more bought and packt up, with an intent to be kept till *May* next: The Reader may be informed of the truth of this Experiment, by divers credible Witneſſes, at a *Plummers* on *Garlick-Hill*, where it was performed.

And here it is not amiſs to intimate, that Jug-mettle is much more durable than other ſorts.

Of Eggs.

I Am credibly informed that Eggs have been packt up in a barrel of Salt, that the ſame have kept good to *Jamaica*, and ſome time after the Ships arrival there, they uſing to rowl or turn the Cask, whereas others packt in Meal or Flour, quickly became muſty.

Extraordinary Experiments in preſerving Butchers Meat, Poultry and Fiſh without Salting.

1. A Leg of Mutton bought freſh out of the Market, hath been Buried about a quarter of a year in a heap of hard dry *Portſea* Salt, and then taken out, proved very ſweet, good, and freſh, and being boyled, made freſh Broth.

Of this Mr. *Pen*, at an *Alehouſe* at the Weſt-end of *Thames-ſtreet*, and Mr. *Tiſdell*, a Waterman that Plies there (and others,) can make full proof, as having been at the eating thereof.

2. They inform me alſo, that a whole freſh Salmon was buried a quarter of a year in a heap of Salt, and came out with good ſucceſs.

3. Mr. *Alcorne* informed me, that he had cauſed the Guts of a Turkey to be taken out, a Hair-bag with Salt to be put into the Body, and then the Fowl in its feathers to be Buried a quarter of a year, and then being taken out, ſtript and Roaſted, proved tender, and as ſweet, as one freſh from the Shop.

4. He further informed, that a Chine of Beef was Roaſted, and put into a barrel of Salt, to carry to the *Eaſt-Indies*, to eat cold there, that the Ship ſtayed ſome weeks in the *Downs* before She put to Sea; that about the length of the *Canaries*, or ſomewhat ſhort of it, it was eaten cold, and proved very good, and he doubts not, but it would have been the like at the *Indies*.

5. If a Brine be made of Salt and Water, it is outwardly of a cold Nature, as we have asserted in page 9, and is very proper to put bottles of Wine in, to keep them cool.

6. Forasmuch as old dry hard Salt, preserves what is buried in it, from Frost in the Winter-time, from Heat in the Summer-time, and from Air at all times, it cannot but be very proper to bury in it, bottles of *Florence* or other Wines, Cyder, Oyl, Ink, to keep them from Freezing in the Winter-time.

7. It cannot but be good to preserve divers sorts of Fruits and Roots, as Pyne-Apples, Oranges (wrapt up in Papers,) Hartichoaks, *&c.*

One *Thomas Marshall*, a Fruiterer, informed me, that he covered a Peck of Peafe with their shells, and then covered the shells over with a heap of Bay-Salt, and they kept till the middle of *March*, and might have done much longer.

It were convenient to lay the Salt in a dry upper Room on a Mat, which for preserving of Hartichoaks, might be first strewed with Salt, then the Hartichoaks set in rows, with their tops downwards, then covered over with a Hair-Cloth, and then the Salt poured on.

8. The necessity of preserving Venison and other Flesh, in the heat of Summer, may occasion more Experiments, which I humbly beg may be imparted.

OF THE
Canary-Trade.

Before we part with the Reader, it may not be unfit to entertain him with a Glaſs of Wine, wherefore let ſomewhat about it enſue.

MAſters of Ships, and moſt Merchants, know it to be a Trade, at leaſt of late, very diſadvantageous to *England*, and that in theſe Reſpects.

1. That we pay double the price, we formerly did for it.

2. That we are mightily over ballanced in this Trade, the *Canaries* taking off more Commodities eſpecially Fiſh, from *Ireland*, and leſs from *England*, than they formerly did.

3. That by reaſon this Trade lies open, every Ship ſtrives to go firſt, and return firſt to Market; hence the Inhabitants knowing we are covetous of this kind of Wine, take the opportunity of enhancing upon us.

4. Which alſo gives them an opportunity of making and vending much bad Wine, made of Grapes, ſome Ripe, ſome Green, ſome Rotten, and this is that ſort which commonly arrives here before *Chriſtmas*, whereas the better ſort comes afterwards.

For proof whereof, I rather cite Authors that have conſidered it, than depend upon other Informations.

In a Quarto Book entituled *Trade-Reviv'd*, Printed in 1659, Page 21, *The Author deſires that the* Canary *Merchants may be called to teſtify, who it is but the* Jews *that have ſpoiled that Trade, and brought us to pay twenty pounds a Pipe for* Canaries, *in ready Money (ſilver ſcarce being liked, or able to purchaſe them at that rate, but* Spaniſh Piſtol,*) when as heretofore they were bought by our Nation, trading thither, part for Commodities carried hence, part for time, and part Money at ten pounds* per *Pipe, to the great accommodation of all that traded into thoſe Iſlands, and the expence of our Manufactures.*

The

The Court of Aldermen, and the Merchants in their Petition and Remonſtrance to Oliver, *in* 1658, *Publiſhed by Mr.* Baker, *in* 1659, *repreſent the State of this* Trade *as followeth.*

1. That the *Canaries* being 1000 Miles from *Spain*, the chief of their dependance and Trade is with theſe Nations, (meaning *Great Britain* and *Ireland*) for their Wines, except a few Shipt to the *Weſt-Indies*.

2. That the *Engliſh* formerly bought theſe Wines there, at Ducats 28 *per* Pipe, that is 8 *l.* 8 *s.* which with Fraight, Cuſtom, and Charges, ſtood in 13 pounds Sterling, and now the firſt coſt is Ducats 68 *per* Pipe, that is 20 *l.* 8 *s.* The difference is 12 pounds Sterling in a Pipe, ſo that upon 10000 Pipes yearly Imported as a Medium, we pay dearer in the firſt Coſt, by one hundred and twenty thouſand pounds than we did, ſo that they who were formerly Poor, are now become Rich.

To which adding, that they have doubled their Cuſtoms, and impoſed a new Duty, ſince *Blake* was at St. *Cruz*, for Repairing and Maintaining their Caſtles and Fortifications; he makes our Dammage each Vintage a great deal worſe.

The Author of *Britania-Languens*, an Octavo Book of Trade, Printed in 1680, page 183, thus States this Trade.

Beſides to we have vaſt quantities of Imported Spaniſh *Wines, we alſo purchaſed with our Exported Commodities at the rate of* 10 l. per *Pipe, but now at about* 20 l. per *Pipe, and moſtly with Money, Bullion, and Bills of Exchange, ſo that 'tis computed that of latter years, it hath coſt* England *near two hundred thouſand pounds* per annum, *in Imported* Spaniſh *Wine, over and above the value of our Commodities Exported to the* Canaries, *from whence he ſaith are Imported.*

	l.
About 13000 Pipes yearly at 20 *l. per* Pipe —	260000
And our Commodities Exported do — amount to but about —	65000

Mr.

Mr. *James Boeve*, a Merchant commends this Book, as very uſeful and judicious, and this I mention to take an opportunity to return him thanks, (which I hereby do,) for a conſiderable number of Printed Papers, and Books about Trade, which he was pleaſed to beſtow upon me; amongſt which one was Publiſhed in 1641, by *Simon Smith*, then Agent for the *Royal Fiſhery*, entituled the *Herring-Buſs* Trade, in which Book the Reader may find the *Dutch* Laws, thence cited in page 58, *&c.* and a judicious account of the charge of a Buſs or Dogger, of the Nets, with the manner of their catching the Herrings.

Now the inconvenience of the *Canary* Trade aforeſaid being notorious, it is fit to propound the Remedy, *viz.*

That it being but one place, to prevent our ſelves from undermining one another, which cauſeth them to enhance upon us there.

1. That the Trade thereof be reſtrained to one ſole Company, and after others at preſent concerned have had ſome competent time for clearing their Debts, and concerns, none but thoſe of the Company, to have any freedom of Trade thither.

2. That for as much as this Trade may be highly inſtrumental to promote the Fiſhery of *England* (as follows,) it be reſtrained to the *Royal Fiſhery Company*.

3. That ſuch Company raiſe a ſufficient Stock to carry on this Trade, which may be thouſand pounds more or leſs, as ſhall be thought requiſite.

4. That every one that pleaſeth have liberty to bring into this Company a Stock, not exceeding above

5. That for every thouſand pounds ſo put in for the *Canary* Trade, he be obliged to bring in one hundred pounds as a Stock to carry on the Fiſhery Trade.

Hence the Fiſhery will be ſupplied with Adventurers.

Hence if the Fiſhery be well encouraged, they may have Ships belonging to them, which may be employed all the year round thus.

1. In the Summer-time, they may be ſet out to *Greenland*, to be employed in the Whale-Fiſhery, which we have either quite loſt, or moſt ſtrangely decline in.

2. When

2. When they return, they may be gone to *Portugal*, *Spain*, and the *Streights*, with Herrings, North-Sea-Staple Cod, *&c.* and with such other Freight as they can get.

3. And from thence set forth to the *Canaries*, and return with Wine, when it is reduced to a reasonable rate.

Against which it will be Objected.

1. That it will displease the *Spaniards*.

2. That no Wine is so pleasing to us, as that of the *Canaries*.

3. That there they will hold up their Price, and cause the Company to lose the use of their Stock, and the Freight of their Ships.

To which 'tis answered.

To 1. That if we can be content with *Spanish* Wine, to wit, *Sherries*, *Malaga's*, *Alicant*, it will be all one to the *Spaniard*, but much advantage to us, in regard we shall have near twice the quantity, and in barter for Goods, as we now have from the *Canaries*, where but little of our Goods go off, neither do we argue for dissolving, but only reducing that Trade.

To 2. The Mountain Wines of *Spain* and *Portugal* are very good, Green, not over sweet or Luscious, and pleasing.

To 3. If we return, and take in a Lading in *Spain* and *Portugal*, where all Trade ought to be open and free, then that Objection is answered.

Now how advantagious to the Woollen Manufacture, it might be to have a free Trade with *Portugal*, for Wines, Oyle, Shoomack, *&c.* I find well asserted in a Printed Paper offered to the last long *Parliament*, whereof I think fit to insert a Coppy.

Whereas the Portugal *Trade is very advantageous to this Nation, because it doth annually consume a great quantity of our Manufactures, Fish,* &c. *and of late declines, because the Sugar and other Commodities of that Country, are either so fain in Price (here,) or grown so scarce there, as that the Merchants trading thither, cannot procure wherein to have Returns, nor the People of that Country wherein to make satisfaction for the Goods they take, which hath occasioned the setting up of Fabricks of*

their

their own, and the Prohibiting of our Commodities, to prevent the ſaid Inconveniency, being that Country abounds with ſeveral ſorts of good Wine, and is capable to afford great quantities thereof, which are in a manner totally Prohibited from being brought into this Kingdom, by the great Cuſtom charged on them, of 16 l. 18 s. 11 d. per Ton, *as on* Spaniſh *Wine, whereas their uſe, nor goodneſs, doth not render them capable of paying more than the* French.

It is humbly conceived, it may be the Intereſt of this Nation, that by Act of Parliament, the Cuſtom of the ſaid Wines may be abated, and that ſeeing the Freight from Portugal, *is* 40 s. per Ton *more than from* France, *that the Cuſtom may be leſs than what is charged on the* French *Wine, for the Reaſons following.*

1. *The abating of the Cuſtomes, would certainly introduce the expence of the ſaid Wine, and make them ſerve to ſupply the great want of Returns, at preſent experimented in that Trade, and conſequently be a great means to increaſe the Conſumption of our Manufactory in that Country.*

2. *It would diminiſh the Importation of* French *Wines, which it is well known, are purchaſed with Monies, whereas it is probable, theſe will always be purchaſed with our Manufactory; and it may be convenient, to encourage the growth of Wine in* Portugal, *thereby to leſſen the* French-Trade.

3. *Whereas the Prince of* Portugal *did about a year ſince, make a Law to prevent the wearing of Foreign Cloth, Gold, and Silver-Lace, and ſome other Commodities, and did alſo ſet up Fabricks of Bays, and Serges in that Country, becauſe they have not Effects to ballance their Importation, which hath already proved of great prejudice to the ſaid Trade, and may prove very fatal if purſued: It may be hoped, that by thus introducing the expence of their Commodities, and the taking of them in Exchange for our Manufactures, they may be brought to neglect the Obſervation of the ſaid Law, and the ſaid Fabricks, becauſe the occaſion of them will be thus taken away.*

4. *It may advance his Majesties Revenue, for the present extraordinary Custom is little less than a totall Prohibition, so that the said Wines yield at present very little to his Majesty, whereas if the Custom be abated, they may yield a considerable Sum, and whatsoever may be received less on the* French *Wine, will be advanced on these, and probably more, because of their variety and goodness, and also because a great quantity of the Wines of that Country are not so strong as the* French.

Now seeing this Wine is not yet arrived, let us treat our Poor, Wet, Wearied Fisherman, (to whom I am beholding,) with somewhat to refresh him, resembling Burnt Wine, wherefore a word.

Of Ale (or Cyder.)

INto a quart of either, put in a quartern of Brandy, a sprig of spear-Mint, and a quarter of an Orange, four Gloves, then Boyl it, Scum it, and Burn it if you please, as you do Wine, and put to it a pennyworth of Sugar.

Ale and Brandy may be also used to make a Posset.

A SHORT NARRATIVE OF THE SUFFERINGS And Case of the Salt-Workers OF *Sheilds, Northumberland, Durham, &c.*

Taken from their Petitions and Papers, presented in *Parliament*,

The Occasion of their Increase.

1. IN *Anno* 1627, and 1628, in time of Wars with *Spain* and *France*, Salt was so scarce, it was Sold at 8 *s.* 9*s.* 10 *s.* a Bushel; and in 1629, upon conclusion of a Peace between *England* and *France*, the *French-King* put out an Edict that none should be Exported, on Confiscation of Goods, and loss of Life.

2. Hence about the same time, Peace being also concluded with *Spain*, about 200 or 300 Sail of Ships were sent to *Spain* for Salt, where that King making an advantage of our Necessities, laid an Embargo on the Ships, which being taken off, there followed so great an Imposition on their Salt, that it came to double the price of Salt then and there made, to the Merchants great loss.

3. This occasioned the Lord Mayor, Aldermen, and Company of Fishmongers of *London*, and divers other Corporations, in *Anno* 1630, to Petition his Majesty *Charles* the first of blessed Memory, not only to Prohibit the Exportation of Salt from *Newcastle*, but likewise to encourage the making of great quantities there, and in parts adjacent, by rendring the Saltworkers a Corporation, both which were granted.

Their Progress and Discouragements.

WHereupon they Erected many Wharfs, Boyling-Houses, and Pans in those Parts, whereof those at *South-Sheilds*, being Built on spare neglected Church-Lands, the *Dean* and *Chapter* of *Durham* compelled them to take Leases, and pay an annual Rent for the same.

In *Anno* 1644, the *Scots* taking *Newcastle*, dispossest divers of the Saltworkers of their Salt-Pans, by reason of their Loyalty to his Majesty, and pulled down, and destroyed many others, pretending them to belong to *Popish* and Malignant Owners, on purpose to advance their own Manufacture of Salt.

In 1646, the *Scots* removing out of *England*, the Saltworkers made hard shift, to restore part of their Ruined-Works, and Pans, but to their great Loss. For in 1648, the usurped Powers exposed to Sale all Lands belonging to *Bishops*, *Deans*, and *Chapters*, also the Salt-Houses and Pans of the Saltworkers, that lived at *South-Sheilds* being Built upon Church-Lands, they were enforced to purchase the same of the said pretended Powers, or of others who bought them over their heads, at a very dear Rate.

Moreover in 1648, Sir *Arthur Haslerig*, comming to Command at *Newcastle*, (to add to their Miseries,) laid on an arbitrary Imposition of 4*s.* a Wey on Salt, and as much on a Chaldron of Coals, for the use of the Garrison as he pretended.

From 1644. to *June* 1647, the *Scotch* undermined the *Newcastle*-Saltworkers in their Trade, by an unequal Imposition in the Excise, being a half penny a Gallon, as well on *English* as *Scotch*, whereas the Duty on *Scotch* (being Foreign,) ought to have

have been as other Foreign Salt, a penny a Gallon, in regard Coals, Labour, and Diet in *Scotland*, (especially during the time of our Troubles, and heavy Taxes;) were cheaper by one half there, than here.

Besides, the *Scots* for four years together did not pay Excise, till they had brought their Salt into the Market, and Sold the same; whereas the *English-Maker* paid Excise at the Pans, besides the Disparity of Measure between *Shields* and *London*, and the waste by the way, was exceeding injurious to the *English* Traders, for 20 wey at *Shields*, did not upon delivery make out above 12 wey at *London*, and sometimes less. Whereas the *Scots* not paying till a Sale in the Market, paid for no more than was really made out.

These Reasons being offered to *Parliament*, they took off all Excise from *English*-Salt, to Commence from 24 *June*, 1647. and left but a half-penny a Gallon on *Scotch*, as before.

This notwithstanding proved no Redress, to the long-suffering injured Saltworkers, who upon experience still finding themselves undermined in their Trade, by the *Scotch*-Salt, obtained an Act of the *Rump-Parliament*, of 12*th*. of *June*, 1649. Declaring all Salt not made in *England*, should be understood as Foreign-Salt Imported, and pay Excise accordingly.

Whereupon, immediately a Knot of *English*-Traders in *Scottish*-Salt, that got great Gains by the Ruin of our own Manufacture, (to uphold their filthy Lucre,) make application to *Parliament*, to bring on an Excise of a half-penny a Gallon on *English*-Salt, alledging the necessities of the Common-Wealth, the considerable Revenue that would arise thereby, that *Scotch*-Salt was better than our own; that we had a considerable Trade thither, which would be lost, unless we took Returns in *Scotch*-Salt, which would turn to the Merchants great Dammage, unless the Duties between both were well moderated. And accordingly the *Rump-Parliament*, from *Midsummer* 1649. laid on an half-penny a Gallon on *English* Salt, and one penny half-penny a Gallon on *Scottish*, which continued to 1654, during which time the *Scottish*-Salt undermined the *English*, notwithstanding it paid 33*s*. 4*d*. a wey, (of 40 Bushels of 10 Gallons each,) more than the *English*, by which means above 160 Pans or Works became waste and ruinous, which if restored, would be able to make from 16 to 18 or 20 thousand

wey

wey of Salt yearly, which they believe is as much as ever was Imported into the Nation in one year, by *Scots* or others.

The *Rump-Parliament* being Dissolved by *Oliver Cromwell*, the Saltworkers were in hopes to get some relief by that Change, but met with the quite contrary, for the said *Oliver* and his Council, without staying for the Authority of a pretended Assembly of *Parliament*, did ordain to Unite *Scotland* into one Common Wealth with *England*; and that all *Scotch* Goods for the future, should pass as free, and with the like priviledge, as Goods pass from *Port* to *Port* in *England*.

Whence the Saltworkers fell into despair, and no less than 80 Pans more and upwards were Ruined then, reckoning it impossible to have vent for a great part of the Salt they commonly made, or could have made.

The Saltworkers by his Majesties happy Restauration, were in great hopes to find Encouragement in the said Manufacture of Salt, but have met with the quite contrary in divers Respects.

1. Those of *South-Sheilds*, were inforced to pay considerable Fines, and to take Leases of the Pans, Grounds, Staiths, and Houses, of the Church, to whom the same were Restored.

2. The Saltworkers of *Northumberland*, *Durham*, &c. *Cheshire*, and *Lancaster*, finding the vent of their Salt in those *Northern* Countries, on the Coasts and in *Ireland* much obstructed, obtained from the *Parliament* in 1662, as a compensation of their sufferings, a high Duty of Customs to be imposed on *Scottish* Salt, to wit, a halfpenny a Gallon, that is, 13*s*. 4*d*. a wey, which yet continues, (whereas *French* pays but 1*s*. and *Spanish* 1*s*. 4*d*.) But the intent of *Parliament* in discouraging the said *Scotch* Salt is frustrate, by reason a Farm of the Customs of all Foreign Salt Imported hath ever since 1662 been Let, and Expires not till *Michaelmas*, 1688. The which Farm hath been extreamly prejudicial to the Saltworkers, the Nation, and his Majesties Revenue.

3. To

1. To the Saltworkers.

THey are informed that by virtue of the ſpecious pretences aforeſaid, that *Scotch*-Salt is better than *Engliſh*; that unleſs moderated in its Cuſtoms, it would breed an enmity between *England* and *Scotland*, and prevent all Trade thither and Returns thence, the farmer hath obtained a conſiderable Defalcation of 800*l. per annum*, as granted to admit *Scotch*-Salt at half Duty of Cuſtoms, (as they beleive or as bad,) the ſame as they are informed being Subfarmed to the chief Traders in *Scotch*-Salt, and to *Scotch-Men*.

By which means, the Condition of the Saltworkers is much worſe than formerly, albeit, as aforeſaid, when *Scotch*-Salt paid 33*s.* 4*d.* a wey more than *Engliſh*, they were undermined in their Trade, and forced to deſert 160 Pans.

2. To the Nation.

BY reaſon the ſaid Works did Employ many thouſands of poor People and Families, who depend on that Manufacture; who are now reduced to Beggary, and incapacitated to pay Taxes towards the Maintenance of a neceſſary War, ſhould ſuch happen: The Salt being reduced to ſuch low Rates, that there being nothing to be got, Adventurers give over the Manufacture, having vaſt quantities on their hands, without any Proſpect of Sale thereof, unleſs to great Detriment, and even when their Condition was at the beſt, they gave over Working five Months in the year, for want of vend, at ſo low a price as 8*d.* a Buſhel.

3. To his Majeſties Revenue.

IN regard the Farm-Rent, (if paid into his Majeſties Exchequer,) being but 1000*l. per annum*, (as ſome have aſſerted) is inconſiderable, to be put in ballance with a national injury; and ſuch advantage to his Majeſties Revenue, as they have long ſollicited to obtain, as a recompence for the loſs of the Cuſtoms on Foreign.

For

For Remedy they humbly Crave.

1. THat the said Farm may be vacated if possible, by his Majesties Interest, or Let, and Subfarmed to them, if not, that for the future, all Customs on *Scots* Salt, may be Leavied by Sworn Custom-House Officers and others.

2. That our Fishermen in the *North* and *Irish* Seas, and at *Iceland*, be obliged to Lade and take in all their Salt, (to be spent in Fishing) in the Ports of *England*, before they put to Sea.

As to the Salt of Chesshire, Stafford, *and* Worcestershire.

THe increase thereof is so great, by reason of many new-Brine-Springs, discovered from time to time without the cheif Salt-Towns, Seawards, and by the Discouragements put upon their Sales, by reason of *Scotch* Salt Imported into *Ireland*, and *French* Salt Imported into the Western parts of *England*, but more especially in great quantities into *Ireland*, in return of that great Trade they have with *France*, for their Flesh, &c. since the Act for Prohibiting *Irish Cattle* first past, the cheif use thereof being to Salt the Beef they Ship off, which is very much, to wit, the Worthy *John Bull*, Esquire, Justice of Peace, affirms, that his Majesty was informed by an *Irish* Earl, that no less than 48 thousand barrels of *Irish* Beef, weighing 2 *C.* and a half weight each, had in a years time been Landed at *Dunkirk* only, from such like causes it comes to pass, that many thousands of poor Labouring Families are undone, and the Proprietors of Works and Pits reduced also to a wretched Condition. A Share that formerly yielded 60 *l.* a year, Rent or Benefit, not now rendring above 6 *l.* Salt being reduced to 6 *d.* a Bushel at *Northwich*, the most eminent Salt-Town in *Chesshire*, whereas of the Brine, there and in other places of the County, vast quantities of Salt may be made, far excelling either *Scotch* or *French*, in goodness.

Lastly,

Lastly, As a most effectual remedy to these Agreivances, I might name Honourable, or Eminent Persons of *Cheshire*, *Newcastle*, and *Hants*, who have long by themselves or Agents sollicited the laying on a small Excise, (or Duty payable on Salt at the Works) on Native-Salt, on Condition to disqualify Foreign, by a high duty of Customs, as an ample Compensation to his Majesty for the loss thereof, and for the advancement of the Fishery.

Against such a Duty, the common Objections raised by the Parliament-Men of Cornwall, *and* Devonshire, *are,*

OBJECTION, 1.

That *English* Salt will not cure their Pilchards, which is a considerable Fishery.

ANSWER.

The design of this Book, is to prove the Excellency of our own Salt above any other, wherefore it ought not to be disparaged without due Tryal, which we have not heard to be hitherto attempted, wherein they may have the help of some able Fishermen, that have much Experience in Salting or curing of Fish: Moreover the Fishmongers affirm, there cannot want good Success, in regard Herrings require a better Salt than Pilchards, and the former, to wit, Herrings, cannot well be cured with Bay-Salt, (much worse than *English* refined,) and the latter (*viz.* Pilchards) may.

OBJECTION, 2.

That they cannot otherwise dispose of their lean, shotten, or sick Pilchards, but in Barter for *French* (or Bay) Salt, which serves most excellently for their *Newfoundland* Fishery of Poor-Jack.

ANSWER.

1. The Fishmongers say, there ought be be a Law made, to restrain the catching of Pilchards, (as in *Holland* there is of Herrings; see page 107) after such time as the Shoal begins to be lean, shotten, or sick, as a good medium to preserve, and increase the Breed.

2. That the shotten Pilchards, (as well as Herrings,) cured with a refined Salt, may probably be vended at other Markets, with no less, (if not greater) advantage.

3. The total Prohibition of *French*-Salt is not aimed at, but the Discouraging the expence of it, at home; it may be still had in *France*, and carried to *Newfoundland* without Dammage, (notwithstanding the Proposal,) unless Landed in *England*.

What if you lose somewhat in this (inconsiderable) unfit Fishery, you may undertake better elsewhere, see page 102, 107, besides it were better you should loose something, than the Trade of Salt-making be Ruin'd. Many Brine Springs run at wast, and many thousands of poor Families want Employment, for about half their time every year.

5. The *Newfoundland*-Fishery, as you see in page 93, wants a Revenue to support it, and may be had out of Salt, which if you longer oppose, perchance you will embrace a Shadow, and lose a Substance.

6. In the late times of Usurpation, the Excise of Salt was thus established.

All Salt made, or to be made within *England*, *Wales*, or Town of *Berwick*, which is, or shall be Shipped, or conveyed by Water, to be paid by the first Buyer of such Salt, at the place of Landing, or Unloading thereof, on every Gallon, a halfpenny —	$\frac{1}{2}$ *d.*
All other Salt therein made, and not Shipt, or conveyed by Water, to be paid by the first Buyer thereof upon the first delivery, the like —	$\frac{1}{2}$ *d.*
All Salt upon Salt, that is made of Salt within *England*, *Wales*, or Town of *Berwick*, to be paid by the Maker thereof, upon every Gallon, a farthing —	$\frac{1}{4}$ *d.*
All Foreign Salt Imported, upon every Gallon to be paid by the first Buyer, three-half-pence —	1 $\frac{1}{2}$.

These

These Impositions were first Farmed, To Sir *Martin Nowel*, at ——— 15 } thousand pounds *per annum*.
Then at ——— 20
Afterwards at ——— 24
Lastly, To *Richard Best*, Esq; at ——— 26

Which ceased after his Majesties happy Restauration.

Now how by the ayd of such a Revenue, the Manufactures of Tin, &c. might be advanced, and the Fishery of the Nation Encouraged, and Established, I have mentioned in my Plea for the Importation of *Irish* Cattle, Printed in 1680, the Impression of which (Book) being Sold and gone, I crave leave to Reprint part of that Discourse here, as I hope to do other parts of it, in a Treatise of Fishery hereafter, *viz.* in page 12. I thus argue.

Concerning TIN.

I have heard divers Merchants of late years affirm, they could not get the Interest of their Principal by it; and when the Debate about Tin-Farthings happened, the *Pewterers* affirmed, that there was 12000 *l.* worth of Tin at *Smyrna* remaining, that had been some years in the hands of one Mr. *Pyrmont*, a Factor there, that he could not sell to any advantage; and it's well known that Tin was never so cheap at home, nor more of it lying on our hands than now, albeit his Majesty ever since 1666. hath received no benefit by his Prerogative of Preemption, nor is like to have any for the future; whereas in former times it was farmed at 12000 *l. per annum* Rent.

The Case being thus, give me leave to make a Digression about the improvement of our Native Commodities.

Endeavours have been on foot to restore this fall'n branch of the Revenue by Farming it of his Majesty. But coming to a Composition with the Miners of Cornwall, to take off all the Tin the Mines yield, or at least 12000 Tons *per annum*, but there were two Rubs in the way; the one was, the Convocation could not well come to such an Agreement, till an Act of Parliament was obtained to bind all particular Miners to stand to such contracts as the said Convocation should make. The other was, the Farmers would not undertake such Bargain without

Covenanting with his Majesty, to supply *England*, *Ireland*, and the Plantations with Tin Farthings, a pound weight of them to be cut into 16 Pence, that by the profit of these Farthings the Farmers might be enabled to pay their Rent.

This Design was opposed by the Mint, as an abuse to be put upon the Nation; many arguments were then urged against Tin Farthings, whereof I shall enumerate some few; as.

1. That a Metal might be made whiter and harder than Tin, of Litharge of Lead, (that is refined Lead, which proves extraordinary hard and white,) incorporated with *Spelter*, and some Poysonous Ingredients, *Arsenick*, *Regulus* of *Antimony*, &c.

2. That such Metal, when worn, would not yield above two Pence a Pound, or little more, and no *Pewterer* durst use it, as being contrary to the Laws or Orders of their Company.

3. That Tin Farthings might be Coyned with a Hammer, cast in a Mold, squeezed in a Vice, and be counterfeited by any *Pewterer*, *Letter-Founder*, *Tinker*, *Plummer*, *Smith*, *Glasier*, *Tinman*, *Watchmaker*, &c.

4. Hence a *Query* was put to the Farmers, whether they would change all that were brought to them or not, good or bad, either made by themselves or others? And if so, who should allow the Country and City Brewers their Charges, in sending them up to *London* in Drays and Wagons, with Tellers?

5. They refusing, it was inferred, that if Tin Farthings were Established, His Majesty must receive His Revenue of Excise (and the Duke of *York* his Postage) in Tin Farthings, in regard a Brewer cannot avoid the taking of much Money in Tin Farthings at home of Tub Women and Firkin Men, and abroad of the Ale House-keepers that are his Customers.

These Arguments ruined that wretched Design, and I pray let it sleep in its Rubbish.

Afterwards one Mr. *Vane* Deceased, proposed a Design to make Tin the *Fundus* of a Bank, to be managed for his Majesty's advantage by Commissioners that were able Merchants, that could pay the Miners by Contract for the Tin quarterly, and be reimbursed by Sales, when it should bear a price, or by others that would have credit in the said Bank. And His Majesty to promote the same, bought up 60000 *l.* of Tin when it was cheap, to wit, at 3 *l.* 8 *s.* 6 *d.* the Hundred weight, of which this was the event.

The

The Plot breaking out, and the Parliament not sitting, such Contract could not be made with the Miners; and the said Tin after it had with Warehouse room, and Interest of Stock, cost about 3 *l.* 16 *s.* the Hundred weight, was sold at the *African-House* at about 3 *l.* the Hundred weight, or little more; and those that bought it so, Shipp'd off most of it to *Holland*, and are great Losers by the bargain. The cause whereof is this:

The *East-Indies* abounds with Tin, which the *Dutch* buy there at about 5 *d.* a Pound, and bring it home for Ballast Freight free; and they have brought home so much in former years, as to bring down the price of ours. See a Book of the *East-India* Trade, Printed in 1667. where in page 9. you have this passage.:

As for Tin there is vast quantities in some parts of *India*, the *Dutch* during the time of the late Proeemption of Tin, having brought home in two years 4 or 500 Tons: And it might be more advantagious to the *English* Company, not only to Transport Tin from one part of *India* to another, rather than to send it from *England*; but also to bring Tin from *India* to *England*, for Ballast of their Ships that come with Pepper from *Bantam*, did they not prefer the Kingdoms Interest before their private Profit.

The *Dutch* in *August* 1678. brought home, as a Letter from *Holland* mentions, above 100 Tons, which is said to be 5 *s.* a Hundred weight better than ours; and at first sold it at 3 *l.* 5 *s.* the Hundred weight, then fell to 3 *l.* then to 2 *l.* 15 *s.* and ours at that time would not sell for above 2 *l.* 10 *s.*

The case being thus, to apply a Remedy, I humbly addressed my self to the Honourable the *Members of Parliament* that served for the Counties of *Devon* and *Cornwall*; and Propounded,

That whereas we now in *England* make Salt the best yet known in the World, and are notwithstnding much oppressed by Foreign Salt; to Redress which, the Saltworkers have for many years endeavoured to bring on a small Excise on our own, to recompence His Majesty for the loss of the Customs of Foreign, to be kept out by a high Duty.

1. That they would be pleased no longer to oppose such Excise, upon pretence that our *English* Salt would not cure their Pilchards.

Pro-

Promising my Treatise of Salt (in a good forwardness for the Press,) in which should be handled the several ways of making of Salt in *England* and other Countries, and setting forth the Excellency and manner of using our own in curing both Flesh and Fish, for the longest of Voyages through the hottest Climates.

2. That they would vouchsafe to make use of such opportunity to remove all burthens upon Tin, as well Sealing Duty of 4 *l.* a Hundred weight, which may come to 5000 *l. per annum* (except a competent Recompence to the Officers for sealing such as is free from Iron and Dross, according to Constitution;) as also exporting Duty of 7 *s.* 4 *d.* a Hundred, which may come to 7000 *l.* a year, or more.

3. That then a Farm of all the Tin the Mines produce, to be put to the *Tinners* and *Pewterers* Company; the one will so regulate the Price abroad, and the other at home, that we shall not be undermined by the *Dutch*.

This done, the said Companies may erect a Safe Bank, and not be damnified, albeit they have Tin on their hands to a vast quantity and value. The advantages of Banks are great; whereof I shall mention but one; It enables the *Hollanders* to Trade with a dead Stock: to wit, when a Laden Ship arrives, the Goods are appraised, deposited in the Bankers Ware-houses, and Credit given at home or in Foreign parts, for about three quarters of their value; which is an incredible advantage in Trade.

I further humbly represented to them, that in the Usurper's time such an Excise as aforesaid in page 154 brought in 26000 *l. per annum*, when Fishery Salt was excepted, and paid nothing, the which was observed to be a notable back door and a Cloak to many fallacious pretences, whereas laying the duty universal, the revenue raised by Fishery Salt, being employed for the advantage of a Fishery Trade, shall much more advance the design, than the payment of such duty can hinder it, especially seeing our Neighbours cannot be furnish with Salt for that purpose so good and cheap as we by 12 or 15 *per Cent.* And in case the same be employed in the *Royal Fishery Company* in *London*, but parts may complain their Fisheries are discouraged; to which may be replied, that at *London* a duty is paid upon Ballast, but not the like in the out-Ports or most of them, where a re-

revenue may be levied on Ballast to promote their respective Fisheries; And if such duty be laid universal, and well managed, it may produce 38000 or 40000 *l.* a year. And such a stock as that Employed to encourage our Manufactures, shall enrich the Nation much above a Million a year; I offer how, and most humbly move you to promote:

1. In setting up a Fishery Company, to have 10000 *l.* a year given them to Build Ships and Vessels, to encourage Adventurers to undertake the Fishery Trade, and the making of Twine, Nets, Canvas, and Cordage, at *Clerkenwell* Work-house, not only for their own use, but also for his Majesties store, as in the latter part of that Treatise was propounded. And if they be rendred a Council of Trade, (for which reasons were then given, why they are or may be a most proper constitution,) they will go far in earning such benevolence, and doubtless give such advice as followed shall redress the aggreivances of the Nation about Trade and Manufactures, to which I subjoyn, that without considerable Encouragements the Fishery of *England* will be inconsiderable, and that it ought to be undertaken in the *North* and *Irish-Seas* for Foreign vend, but of this at large, God willing in another Treatise, at present see page 67, 107.

To which may be added, that Doggers may be employed, from *Michaelmas* to *Lady day* in a Winter Fishery to supply *London* with fresh and barrel'd Cod, perchance with advantage (though hitherto nothing but loss and that considerable hath occurred;) whereas on the contrary in Summer a loss ensues either by a North-Sea or *Iceland* Fishery, or the Vessels must be laid up, and the Men (though not the Companies Boys) discharged, and not to be had when the Winter Fishery is to be renewed.

2. There is a new Art of preparing, whitening, and dressing both of Hemp and Flax, (afterwards more particularly described in my said Plea,) that shall render it of a silver Colour, so fine that of one pound of it, a thred may be made 20 Miles long, and in value to 50 *s.* or 3 *l.* the pound weight Hence we want no Foreign Linnen nor Canvas, which may be barr'd out by a high duty.

Of the refuse or Tow thereof, of Raggs, Old Fishery Nets and Sayls, may be made Paper; whereof we spend in *England* in Writing and Printing, about 1000 Reams a day, or to the value of 120000 *l. per annum*. Good Paper is made in *Germany* and

and *Holland*; and the Art thereof is attained in *England*, but to encourage the same here, there wants a higher duty on Foreign Paper, and a Company with a good stock to undertake the same; the which might be the Stationers Company, with other Adventurers; to whom for encouragement might be allowed the use of 5000 *l. per annum Gratis*, to be taken out in Stationary Wares for the supply of all his Majesties Offices. This doth not suppose that any that are not of the Company are restrained from undertaking it, on their own private Adventures.

3. By the like encouragement, the Upholsterers with others might be induced to undertake the Manufacture of Tapistry-hangings, the benefit of gaining such Manufacture is great, *viz.*

1. It will save an expence of Foreign Wool, and beget an expence of our own, to the value of One hundred thousand pounds *per annum*, now imported in Tapestry-hangings.

2. It will cause our Cloaths to go off in Turkey in Barter, to procure raw Silk to work up with the said Hangings.

3. It will in the Ballance of Trade save the value of such Hangings yearly to the Nation, and in time become a Staple Commodity to Ship off, in regard we can have Wool, Silk, and Provisions, much cheaper here than in *Flanders* and *Brabant*, the sole Provinces where this Manufacture was formerly made, the skill whereof is now well attained in *England*; but Encouragement in its Infancy, by keeping out Foreign, and a stock to carry it on, is wanting.

4. It will employ many thousands of poor People in Carding, Combing, and Spinning, besides Dyers, Weavers, Worsted-workers, Drawers, and Designers. See the excellent Proposal in Print of Mr. *Francis Poyntz*, His Majesties Tapistry-maker.

Lastly, If there be yet a Surplus, the Revenue of the Mint craves it; the said Revenue was much too short for Coyning any considerable quantity of our Moneys into smaller pieces than Shillings, even before the Prohibition of *French*-Wines, (which paid 10 *l.* a Ton Coynage duty,) and became a notable Abridgment of such Revenue, namely, 6000 *l.* a year. Moreover to Coyn more Moneys small, is the best way to accommodate the People, and prevent Exportation.

To

To which may be added that the Mint Act being but temporary, it together with 10*s.* a Ton Coynage duty on Wines, *&c.* and 20 ſhillings on Brandy, ceaſed upon Diſſolving the *Parliament* about *November*, 1680. ſo that when 'tis reſtored, I hope there will be a caution in it; to reſtore Copper Farthings much wanted, as likewiſe ſmall ſilver-Moneys.

To this Diſcourſe of our Manufactures (to which many more may be added, and conſequently the Poor employed in them,) I further intimate, that the moſt renowned Sir *William Petty* hath writ an Elaborate Treatiſe, moſt worthy publick View, intituled *Political Arithmetick*, in which he aſſerts, we may employ the Poor, and gain two Millions a year more than we do, by the People we have, without uſing any of the Mediums here propounded.

To which might be ſubjoyned, that we have either almoſt or quite loſt many Manufactures upon the ceaſing of the Exciſe, as Iron, Battery, Braſs, Cordage, *&c.* And that divers other Manufactures might be gained by a higher duty of Cuſtoms on Foreign, whereby the poor might be Employed, the Exportation of Coyn and an overballance of Trade prevented, a Diſcourſe whereof might be a large, uſeful, but uneaſie task.

Laſtly, It is to be hoped, that none of his Majeſties Officers that have long enjoyed profitable Employments, will for the future hinder theſe meaſures without propounding better; and now Courteous Reader, to thy Patience and my own pains I willingly put an

END.

LAUS DEO.

An Advertiſement about Planting the Iſle of Tabago.

TO the Courteous Capt. *John Poyntz*, I am beholding for the information about the *Iſle* of *May* Salt, page 17, as alſo for the following Advertiſement.

He ſaith, the *Iſle* of *Tabago* did belong to the *Crown*, and that his Majeſty parted therewith to the Duke of *Courland* in Lieu of ſome Caſtles in *Guinea*.

That it is Situated *South* and by *West* from the *Barbados*, at about 40 Leagues diſtance, in the Latitude of 11 ½ degrees being about 100 Miles Circumference, and contains 200 thouſand Acres of Ground.

That 'tis better Situated than the *Barbados*, not infeſted with *Hurricanes*; and is a moſt proper *Iſland* for the growing of *Cacoa*, *Tobacco* as good as the beſt *Spaniſh*; that it alſo yields *Sugar-Canes*, *Cotton*, *Ginger*, *Indico*, *Anotto*, *Saſſafras*, *Vanillos*, *Auras*, and *China Roots*, *Rhubarb*, and ſeveral other Drugs; *Balſam*, *Fuſtick*, *Lignum-Vitæ*, *yellow-Saunders*, *white-Wood*, *Cedar*, *Maſtick*, in great plenty and large.

That it is ſtored with *Wild-Hogs*, *Piccaries*, *Armadillos*, and ſeveral other ſorts of *Fleſh*, *Fiſh*, and *Fowl*, with incredible plenty of *Tortois*.

That within a Mile of it Eaſtward, there is a little *Iſland* called little *Tabago*, containing about 1300 Acres of Land being well ſtored with *Goats* and *Deer*.

That on the South Eaſt ſide of *Tabago* (the greater) there is an excellent harbour which will be a free Port.

That this *Iſland* is to be Planted under his Majeſties Protection, the *Engliſh* to hold in it 120 thouſand Acres.

That each perſon that pays 5 *l.* Paſſage ſhall have given them for Inheritance, a Man 50 Acres, a Woman or Child 15 Acres each, to be ſetled under a Regiſter; Liberty of Conſcience to be there allowed, none but *Roman-Catholicks* excepted: That their Articles and Laws are to be ſeen at large, at the *Kings Arms* in *Birching-Lane* from two till four of the Clock every Afternoon, where he will attend to treat at large about the Premiſes.

To make the true Spirit of Scurvy-Graſs, *and alſo thoſe which are now publickly Sold by the Names of Plain Spirit of* Scurvy-Graſs, *and the Golden Purging Spirit thereof.*

TAke a Buſhel, 2 or 3, more or leſs, of large freſh Garden-*Scurvy-Graſs*, bruiſe it well in a Stone-Morter, or Wooden one, put it into a Wooden Veſſel, pour on ſo much Water as will cover it two hands breadth or thereabout, put to it 2 or 3 handfulls of Salt, and a ſmall quantity of Yeaſt; let it ſtand a few

few days till it ferments or works like Ale in the Ton; then diſtill it off in an ordinary Limbeck or Copper-Still, ſave the firſt running, for it is the true Spirit, which if you will have it ſtronger rectify, or diſtill it over again upon freſh *Scurvy-Graſs*; ſave the firſt running as before, and you have a very ſtrong, and the true Eſſential Spirit of *Scurvey-Graſs*.

That which is ordinarily Sold for the Spirit of *Scurvy-Graſs*, Plain and Golden Spirit, or as they call it, is made thus, *viz.*

Take of Commonly proof Spirit, of the Strong-water-Stillers, what quantity you pleaſe, 2, 3 or 4 Gallons, more or leſs, as you pleaſe, infuſe or ſteep in it ſo much Garden *Scurvy-Graſs* as it can well contain, let it ſteep 12 hours, then ſtill it off, and ſave the firſt half of what comes off, which ſtill a ſecond time, and ſave the firſt half as before, and you have that Spirit which is commonly Sold; which if you diſtill over again with freſh *Scurvy-Graſs*, it will be yet ſtronger.

Then take a quart of this Spirit, put it in a Bottle, and put to it three ounces of *Jollop* groſs Powdered, ſtop it and let it ſtand warm either in a Stove, or by a good Fire for 3 or 4 days, till you ſee it grow very red with tincture of the *Jollop*, and then pour it off clear, and this is the Golden Purging Spirit, of which a ſmall ſpoonfull in a draught of Ale, Beer or Wine, is a moderate Purge, although it were to be wiſhed, that there were a better and ſafer way of Purging than by this infuſion in Strong-water, being unfit for hot Bodies; though for their profit, they who ſell it commend it alike to all.

1. This was communicated by a worthy Gentleman.

2 The firſt Spirit is to be had, at the Houſe of Mr. *John Bull*, mentioned in page 136, where are alſo to be had, Marin'd Fiſh, (of which ſee page 120,) *Oxfordſhire* Ale, Cardamum Ale, and Bracket.

3. His advice is, that to ſix Gallons of Ale there be put in a quarter of an ounce of *Jollop*, (which is a white Purging Powder,) and to the value of a Shilling, of the Spirit of *Scurvy-Graſs* right prepared as aforeſaid.

A Collection of Letters about the improvement of Husbandry and Trade, by Mr *John Houghton* Fellow of the *Royal Society*. The Author publiſheth theſe in ſingle Sheets, and deſigns one about once a Month; and alſo would be glad of a Correſpondence with ſuch whoſe Studies or Endeavours incline thereto.

Lemmington, and divers other ſorts of Salt, are to be had at *Billings-gate*, &c. And *Portſea*, or Mr. *Alcornes* Salt, may be bought in wholeſale of the Worthy Mr. *John Bindlos*, a Merchant at the two *Blackamores-heads* in the middle of *Abchurch-Lane*, who I ſuppoſe ere long, will Lodge it in a Warehouſe in *London*.

To page 119 about the Stewing and Collaring of Eels may be added. That if the Eels be alive, knock their heads againſt the Hoore or Dreſſer and it kills them, rub their heads or tails with a little Sand or Salt and then take off their Skin, which will there begin to peele, waſh them clean, cut off their heads, and take out the Guts at the heads of the Eels, roul them up round, and when thus prepared, ſcewer them, as in page aforeſaid.

Beef Suet to be bought from time to time as occaſion requires, beat it with a Rowling-Pin, take away the Skins and chop it ſmall.

Ox-Guts mentioned page 136, being troubleſome to prepare, are to be had ready done in *Cheek-Lane*.

There is lately Publiſhed a ſmall Book, the price whereof is 1 *s.* 6 *d.* with this Title, The *Country-Survey-Book*: or Land-Meters *Vade-Mecum*. Wherein the Principles and *practical* Rules for *Surveying of Land*, are ſo plainly (though briefly) delivered, that any one of ordinary parts (underſtanding how to *add*, *ſubſtract*, *multiply*, and *divide*,) may by the help of this ſmall *Treatiſe* alone, and a few cheap *Inſtruments* eaſy to be procured, *Meaſure* a parcel of Land, and with judgment and expedition *Plot it*, and give the Content thereof; with an *Appendix*, containing *Twelve Problems* touching *Compound Intereſt* and *Annuities*; and a *Method* to *Contract* the work of *Fellowſhip* and *Alligation Alternate*, very conſiderably in many Caſes. *Illuſtrated with Copper Plates*, by *Adam Martindale*, a Friend to Mathematical Learning. Printed for *Robert Clavel*, at the *Pea-cock* in St. *Pauls* Church-yard, 1682.

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ERRATA.

NO Author (unless he would dwell at the Prase) can prevent literal Mistakes, such I pretermit as Pardonable, those that are Material follow.

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